ENVIRONMENTAL SAMPLING PROJECT

TASK FORCE MEETING

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Thursday, June 1, 2000

6:30 p.m.

TASK FORCE MEMBERS

Jeff Fielder

Edgar Bailey

Michael Bandrowski

Pam Sihvola

Sue Markland Day

Keith L. Matthews

David Miller

Carl Schwab

Fran Packard

Chris Whipple

Carroll Williams

Pam Evans

Eric Arens

Paul Lavely

Dick Nolan

ATTACHMENTS

1 One-page document entitled "The Ominous Stack" The ominous stack.pdf

2 One-page document entitled "Cost of Retrieving Inventory Records" Cost of retrieving inventory records.pdf

3 Five-page document entitled "Amounts of Tritium and radiation discharged from the LBNL NTLF with a view toward making these amounts more understandable to the general public"Amounts of Tritium.pdf

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MS. DUFFY: Could we call the meeting to order? If people will take their seats, please. Okay. I'd like to welcome all the task force members and the public who are on the Environmental Project Task Force, and first do some housekeeping items, and so I'd like the people that are here substituting for other task force members, if you can identify yourselves and state who you're substituting for.

MR. FIELDING: Jeff Fielding for the City of Berkeley.

MS. DUFFY: And Eric?

MR. ARENS: I am Eric Arens. I'm sitting in for Evelyn Fisher.

MS. DUFFY: Just so you know, you're sharing a mike with neighbors, if you could pass that around, and bathrooms, for everybody, are out that door and downstairs, and Pamela?

MS. SIHVOLA: I'm Pam Sihvola, sitting in for Gene Bernardi.

MS. DUFFY: You were here last week. I'm sorry, Pamela. So I think -- and we also have Owen Hoffman, representative of the lab consultants, and Ron Pauer and Iraj, you all know last week, and Bernd Franke is going to join us from Germany in about half an hour. He asks us not to call him for half an --

about half an hour.

So I guess we'll move right along to the public comment period, which is a 20-minute period, and Molly Field has pulled six cards. Each speaker will have three minutes. The way it works is there's an indicator on the stand, and for two minutes, it will be green. So at one minute before you end there's a yellow light will come on, and when it's time to stop will be a red light. So, Molly, why don't you just read the names out and --

MS. FIELD: L.A. Wood

MR. WOOD: I guess that's me. I'm sorry that I couldn't make it to the last task force meeting, not that it's one of the major events in my life, but I was very, very disturbed by picking up the minutes to the meeting and hearing a couple of comments from the City's contractor, Bernd Franke.

I'm a little disappointed that he chose not to hear our public comments tonight, and because I want him to hear one from me, and that was one that I was very, very upset over him attempting to draw a line at 1998 and telling this group to go ahead and sample when he was posed as our contractor with a number of problems concerning the sampling plan and the facility.

And this kind of paradox that it's -- someone said a car that's, you know, that has a motor, and it's idling, and that we wanted to fish that out, and by going ahead and allowing the lab to sample, Bernd Franke dismisses some of the work that persons such as myself would hope that he would do.

The problem with this process is that we draw a line in 1997 with regard to environmental compliance and the Lab, and we forgive everything else. If it's so hard for us to go back to 1995 to make discovery to figure out what's going on, what can we do about 1980?

Or as I suggested in a newspaper article, the 1970s when the tritium science was, you know, in its infancy with regard to control and regulating emissions at a time that was pre-silica gel, and so as I said, I'm extremely troubled at this aspect of this little peek at what he's doing and what he's not doing, and I'm very troubled. I was hoping that he would come out and make some critical comments about the sampling plan before he would ever recommend you going forward.

We were suggesting if he took a close enough look he might dismiss the sampling plan all together as unnecessary because of the problems on the hill, and finally I want to encourage this group to include

the Regional Water Board on its panel and include their comments.

The things that I've heard about the ground water, ground water use, the comments by the lab that no one's using the ground water are just, you know, unfounded and that we need an evaluation. Superfund always has ground water associated with it. We need to move forward and, you know, and look at that as a serious issue.

I hope that you will include a Regional Water Board participant and also include their comments, critical comments, to a sampling plan because if you're not going to demarcate the ground water in the sampling plan, what are you doing?

MS. FIELD: Irmi Meindl.

MS. MEINDL: I want to defer my time to Gene Bernardi.

MS. BERNARDI: Good evening. The Lawrence Berkeley Lab, the Department of Energy, and certain members of the task force are in a big hurry to jump in the field and start sampling, even though the Environmental Sampling Task Force hasn't even begun to discuss the sampling plan itself. The group's attention has been on the EPA Superfund process and requirements.

I want to emphasize that even if the task force was really meant to seriously review and analyze the Lab's sampling plan for its own self-investigation, and lo and behold they found it to be a pristine plan consisting of a random sample of the universe of the Lab's radioactive contamination in all media, including ground water, this is not the time to do the sampling.

We must first have the shipping documents for all the tritium shipped into and out of the lab, which the lab has not yet provided to the community or Berkeley's independent research scientist. Only if we have the shipping documents showing how much tritiated product has been shipped from the tritium facility will we know whether the NTLF has been operating in the fashion previous to its six months' closure in 1996. That is, it operated as a user facility used by pharmaceutical companies, universities, pesticide and fair money researchers facilities, not being used and has not been used as it was in the past.

Why should it remain here just to incinerate the legacy waste from previous tritiations? Obviously doing sampling now when the lab is not operating and has not for some time as a user facility will show lower levels of tritium emissions and contamination

than when the tritium facility operates as intended with many users.

Frankly, I was appalled to read from the last meeting's transcript that the Lab's representative from Alta Bates, after attending just two meetings, expressed that the group would be micromanaging to even begin to review the sampling plan. My question to the Alta Bates representative and anybody else supporting jumping in and doing sampling before you even look at the sampling plan, if you feel that the Lab's plan needs no critiquing, why did you join the Environmental Sampling Project Task Force? Thank you.

MS. FIELDS: Candace Kilchenman.

MS. KILCHENMAN: Hello, everybody. I'm from the Berkeley Gray Panthers. May name is Candace Kilchenman, and I'm here tonight because I feel that the Coalition Against Toxic Wastes is heading right in the direction that it needs to be headed. I represent people that are in dismay about the quantity of tritium that is leaking out, and it is my understanding that the tritium vapor dumping into wells, the waterized tritium is much more readily ingestible by bacteria, plants, and kids. This is why it is considered 25,000 times more hazardous.

Now, I don't know how you can get around

that. It appears to me like there's a lot of tritium waste that's dumped higher than reported, and the use of a cap AA, the EPA model for stack emissions when the stack's height is significantly above that of the neighbor of victims, unlike the tritium facility where the stack is actually below LHS, the emission stack's proximity to LHS play system museum in zone one, the DOE estimate does not include emissions from the questionable legal practice of incinerating mixed waste. The toxic chemicals have become radioactive.

We're worried a lot about earthquakes, about dangers of fire, and I really have been reading quite a number of scientific data to indicate that the fact that we don't really know what's happening to us with regard to the amount of tritium. The back yard of my house has -- I've used a Geiger counter, and it's up. Thank you. Thank you very much.

MS. FIELD: Dorothy Vance.

MS. VANCE: Hi. I'm Dorothy Vance. I won't take long. Perhaps somebody else can take most of my time. But I want us to remember the importance of the idea that the burden of proof does not lie with the community that is affected by what's going on up there. Just as in medical profession, we're to avoid any possible trouble that might befall our children

and ourselves.

The carcinogenic threat is very real. It's high in the East Bay anyway and particularly around that area. Just bear that in mind and do the right thing. I'm a representative from the Women for Peace. Thanks.

MS. DOUGHERTY: Thanks.

MS. FIELD: Arlene Magerion.

MS. MAGERION: I give time to Gene Bernardi if she needs it.

MS. BERNARDI: No, I don't need any time.

MS. FIELD: Richard Murphy.

MR. MURPHY: Pamela, would you like to speak?

MS. BERNARDI: Pamela, would you like to speak? We're deferring time to you.

MR. MURPHY: Do you want to? Well, I'll say a few words and give the rest of my time to Pamela. I'm a neighbor of Panoramic and beginning member of the Committee to Minimize Toxic Waste. My name is Richard Murphy, and when you talk about that nobody drinks that water, that ground water, that's not quite true.

I've lost my dog, and I'm sure there are at least six or seven other people that have walked their dogs in the canyon that drink from the stream down in

Strawberry Canyon who have died from cancer. My dog died from cancer of the kidneys and pancreatic cancer. This could be -- I can give you a list of the different people and loss of dogs who use that stream for drinking water.

So I think there is a direct correlation between the two. And that idea that nobody drinks that water is fallacious and a scream. I would like you to stop using tritium up there, and, Pamela, do you want a few minutes? Okay. No. All right.

MS. DOUGHERTY: Thank you.

MS. FIELD: Barbara George.

MS. GEORGE: Hi. I am just coming into this process and don't know all of the stuff that's happened over the last many years, but I have been trying to compile a chronology of the contamination in the waste, the ways that people have dealt with it, and it is astonishing to think that this kind of activity has been going on in a civilized place like Berkeley.

And it's upsetting to think that there are so many people who are engaged in trying to say it isn't so. And one of the things that I feel like is, gee, that just not -- must not be a whole lot of fun to keep trying to cover things up that you probably know

aren't really right. And I really hope that people in this panel will have some way of convincing the lab to do a real sampling project. I think it's just amazing that the ground water is such a big issue, and that is the thing that gets left off of the sampling plan.

I have spoken with some of the people who have worked on sampling up at the lab, and I understand that there's a problem with just getting the data, and part of the issue is that what the lab does when they have a sample that the environmental monitoring people do do is they just mark -- they ask the lab to when they do a sample, then they send it into the lab to get tested, and that instead of asking the laboratory to give them measurements of whatever is there, they just give them measurements down to a certain level, and they say below that is not detectible. So there's no way to measure plumes that are developing and moving around the property and other things like that, and I just feel that everybody knows that the place is a mess.

It's been a Superfund site, and I think it just needs to be cleaned up, and it's just taking a lot of people's time and hassle to avoid cleaning it up, and I'd like to, you know, have a real study with ground water, get some money from the federal

government through the Superfund and just do it. Thanks.

MS. FIELD: Philip Williams.

MR. WILLIAMS: My name is Phil Williams, and I'm the facility manager at the National Tritium Labeling Facility, but the things I'm going to say here tonight, just three things I want to touch on, are my own opinion.

The previous speaker brought up a point that I wanted to touch on, and that is motive. The statement that we're busily running around trying to cover up something that's a huge problem is an interesting perspective. Why are we running the National Tritium Labeling Facility? Well, we have four chemists working there full time who have over 70 years of experience doing tritium work concurrent at the National Tritium Labeling Facility at Berkeley.

We didn't choose to do chemistry and labeling chemistry and that kind of stuff to run around and cover up some kind of terrible environmental problem. We chose it because this is a biomedical research center, and we're aiding biomedical research around the U.S. and around the world. We committed our careers and our lives to doing that type of research.

We -- I don't want to say anything

prejudicial about government pay scales, but basically they don't pay us enough to cover up anything to do with an environmental problem. We're there because we're dedicated to doing science, and, frankly, the skills that I have and the skills that I can use would bring me a damn site more money in industry than they do at the laboratory.

The second and third points that I want to get across to you tonight have to do directly with the sampling plan. Absolutely this tritium facility has been doing research and having users visit it for the last 18 years, and certainly in the last three. I give you my word that we've been doing as much user activity that we can in the last few years, and I will admit to the fact that we're not doing as much as I would like to do, and I will also state that one of the reasons we're not doing quite as much as we should be is because we're running lots and lots of details about environmental problems.

Thirdly, inventory versus emissions, if you want to characterize emission problems to do with automobile emissions, you don't ask the question how much gas was sold in the Bay Area in the last year. You measure the emissions, and you look at the impact of emissions on people's health. What you may ask to

do is find that tritium inventory as a measure of health risk. The sampling plan should be directed at what's being emitted from the facility, not spend your valuable time chasing down numbers of tritium molecules and atoms in the tritium facility and used in all tasks that we use.

MS. DUFFY: Can you call Bernd?

MS. FIELD: I'm going to right now.

MS. DOUGHERTY: We'd like to take just a second, and Molly's going to get Bernd on the phone, and let's just run over a couple of things. I think where we are and where we left off, a few of the members of the public alluded to the fact that several task force members had raised some questions that we needed to be answered during the course of the last meeting.

Also, we went back and went through the transcripts as provided for us by the court reporter and noted some basic flag words of concern that you guys raised in the last meeting, and so what we had on our agenda -- pardon me -- is for David McGraw of the Lab to address some of these issues that were raised in the 25 April meeting. Oh, David -- do we have Bernd on the phone?

MS. FIELD: Yes.

MS. DOUGHERTY: Hi Bernd. Welcome.

MR. FRANKE: Thank you. Good morning in Germany.

MS. DOUGHERTY: Good morning. We know it's very early there. Thank you for being with us.

MR. FRANKE: I'm glad I could be here.

MS. DOUGHERTY: Bernd, we just introduced David McGraw, who is going to be speaking to some of the questions people had raised during the last meeting. Okay?

MR. FRANKE: Okay.

MS. DOUGHERTY: Okay.

MR. McGRAW: Am I on or --

MS. DUFFY: Bernd, can you hear David?

MR. McGRAW: Bernd, can you hear me?

MR. FRANKE: If the voice could be increased a little bit, that would be nice.

MR. McGRAW: If the volume could be put up a little bit. As Sherillyn said, I wasn't here at the last meeting. So just so that I introduced myself to many of the new people that are sitting in for other people, I'm David McGraw. I represent the Laboratory on the task force. My job at the Laboratory is director of the Environmental Health and Safety Division. So welcome for those of you that are new to

the task force, and thank you for substituting for your regular members tonight.

What I wanted to do, even though I wasn't at the last task force meeting; Klaus Berkner sat in for me at the last meeting. As Sherillyn said, we did go through -- got some direct input, but we also went through the transcript, and we picked out some questions that we thought were especially important to the task force, and we felt it would be a useful exercise for us to try and address those questions and sort of levels that I got a sense when I went through the transcript that there was some apprehension. Where are we? What are we here for? Where do we go from here?

And where there's some questions that didn't quite get addressed in terms of what your role is, so what you see up in the screen there is what I picked out of the transcript and may not be absolutely complete, but if we go through them, you have others you think I missed that are as important to the whole task force, we can certainly address them.

So for Bernd's benefit, what those questions are is, Why are we here? How will the task force comments be collected? Why are we seeking -- why are we doing this? Why are we seeking this community

input? How does the sampling plan that you've been given help address the health issue? And then what's the level of operation at the NTLF today, and what's it been through the past few years?

Issues that the public speakers, at least two of them, alluded to, and then one of the issues that came out from a couple of people that spoke to me privately is this Los Alamos, New Mexico fire has reminded us all of how important it is to be prepared for these kinds of events, these kinds of catastrophic events, and if -- have we considered that at the Berkeley Lab, and if so, what have we done about it? So I'll touch on that as well.

MS. DUFFY: Let me interrupt for a second. Before David goes on, I just wanted to invite you to ask questions, task force members to ask questions as David goes. If you want to just speak up, pull the microphone over and speak up. Okay.

MR. McGRAW: So if it's all right, as a way to move forward, I'm going to put up a transparency for each one of those questions and try to address it, and certainly we can have that dialogue or exchange. So the first question that we put up on the list is why are we here?

I think the most important reason certainly

from my perspective and from Dr. Shank's perspective at the laboratory is -- as to why we're here is we wanted your input. That's the single most important reason to me is we want your input. We value your input.

You know, I think the task force represents a broad spectrum of what that community's all about. We think we're pretty expert at the laboratory at certain things. For example, we're pretty expert at meeting regulatory requirements. We've had lots of practice doing that. We think we're pretty good at it.

You've got some expertise sitting on the committee here, task force, rather, that we don't have. We'd like some of that expertise. Each one of you has expertise. Some of that expertise is because you're a technical person. Some of you have expertise that we might characterize as non-technical but especially insightful, and let me give you an example of this.

I think we as a laboratory -- remember my first discussion with you in the very first meeting made the comment about the fact that we had at one time considered ourselves in a sense the stealth lab. Nobody knew about us, and that was a problem for us because we really wanted the community to know about

us, the scientific community and the technical community in the United States.

Now we're no longer the stealth laboratory. We achieved a certain kind of notoriety, maybe not the kind we want, but we're no longer the stealth lab, but the fact is we've never reached out to the community in this way before, and we're not very good at it, and so that's the other piece we wanted from the task force. Some of you can give us real insight as to how to do that more effectively.

So not only want the technical input, I can't overemphasize this enough about how important your insights are to us as a laboratory. It's independent of what the EPA needs and wants. So we want your input. We want your input across that whole spectrum of technical experts that are on the committee and insightful community members in terms of what's important to you as a community.

And then the third point up there is the EPA suggests that we do this anyway. That's not the very best reason to do it. It's an important reason. We wanted to satisfy the DOE or EPA. They're very important stakeholder. They're your representative to make sure we're doing the right thing, but I would say that's a secondary reason, an important reason, but

secondary to the one I just talked about.

And then finally, little bit different point from my first one, the lab really does want the community to know more about our operations at the laboratory. We want you to know more about lab operations, period. It's time for that.

Okay. The third question we had up there was How will the task force comments be collected? And I may not have exactly -- no, this is another -- I'm going to say I might not have the exactly right spin on this question, but it was the next question that I may not have the right spin on.

This one, How will the task force comments be collected? Well, one way is here by giving this input in the forum, but there's other ways to do it. You can do it orally here, doing it in writing here, do it orally by contacting us by telephone, but we've also provided some conveniences for you, which I've got here, just to remind you of what those are now. We handed those out to the first meeting, but we do have a website. There's the address. Again, you can write us; you can e-mail us. And you can e-mail Terry. She'll certainly give you my e-mail, but we only put one e-mail up here for convenience. So we perhaps centralize the comments if that's the venue that you

choose is by e-mail.

So various ways that you can provide us with your comments. Whatever your comfortable with. We will collect and tabulate those comments. When we tabulate them, part of that process will be considering them very seriously, as I'm sure the EPA will do, and that really gets to the next issue. And then the comments will actually be posted.

So we'll share those comments. So Fran's comments won't be kept a secret in the sense that that comment will be up there. It may not be attributed to Fran, but the comment will be up there. So if Dick comments, that comment will be up there. So we will tabulate and post those comments. That might stimulate some thinking amongst the entire task force.

Now, this is the one that I was alluding to previously that I may not exactly have the right spin on, but as I understood it from some feedback from the folks in my staff that work here and from the facilitators and from reading the transcript is that there was some sense that what's all this about anyway, if EPA is just going to make it a, quote, political decision? Is EPA really taking this seriously? Is this just a sterile exercise?

Well, let me park that comment for a minute,

and Mike may want to comment on this, but I'll tell from the Laboratory's perspective, your comments will be taken seriously irregardless (sic) of -- I have every confidence that EPA will take your comments seriously, but I can guarantee the Lab will. Mike can guarantee what the EPA will do, and that that will influence our policy if it's a meaningful comment in the text of the sampling.

In fact, I think experience should give you some confidence that that's a statement that's made with some integrity because you've already influenced the sampling plan. Your comments have already influenced the design of the sampling plan. I'm going to summarize that at the end of my comments.

But we're doing transpired water. We've included -- that was based on input from the community. We're doing some vegetation samples. So you've already had an impact on the plan. I don't believe for a moment that the EPA would have asked us -- as I said, I can't speak for the EPA, but I have every confidence that Mike can and will, but I don't believe for a minute they would have asked us to engage you if they didn't think that they give serious consideration to your input. Do you want to comment on that, Mike, at this point or wait?

MR. BANDROWSKI: You haven't said anything that I disagree with. Yeah, EPA certainly wants the Lab to include the comments from the public. I think maybe one thing I'll just clarify, and I think Philip tried to do it last week, is that ultimately it's DOE that makes the decision on when the sampling plan is ready and start sampling. What EPA wants is data and, you know, we don't somehow at some point say the sampling plan is done, and we approve it and say go ahead. It's DOE that will decide that it's ready to start being implemented, and then we will look for routes, and he wanted to review the sampling plan, and we have reviewed it.

We provided comments, and he wanted to see the citizens' comments, and officially Superfund's position is they requested data from DOE, and DOE is to provide that data in that sampling plan as a step along the way, but DOE decided at any point to start getting that data for EPA.

Would it be fair to characterize your role that you would confer that this sampling plan as constructed would meet your needs?

MR. BANDROWSKI: Currently constructed?

MR. McGRAW: No, ultimately at the point when we move forward, what I would hope would happen

is that certainly be understandable of DOE that EPA would concur if we were about to move forward that, yes, this is a reasonable sampling plan for our needs.

MR. BANDROWSKI: Sure, sure, yeah, yeah, we definitely would do that, and we definitely want to see the comments from the community and how those have been addressed.

MR. McGRAW: Good.

MS. SIHVOLA: I have a question regarding the lead agency as Department of Energy is the lead agency for the sampling plan, and all of the official comments from USEPA have been addressed to the Department of Energy Environmental Restoration Division in Oakland. I don't know why the Department of Energy was not listed here for the task force members' benefit. We are only to address the public relations office of LBNL.

MR. McGRAW: One of the things I think -- let me respond to your comments in two ways or on two points in your comments, Pamela. I want to clarify for the task force members your comment to the point that I would invite Mike and Dick to comment here, too, that DOE is the lead agency.

This is a very confusing term, and, Owen, you can jump in here. You are more the Superfund expert

that I am. DOE is not the lead agency for making the priorities list decision relative to what the score tells them. EPA is the lead agency for that. DOE -- and Mike is shaking his head on that. He concurs with that. DOE is the lead in terms of saying we can move forward on the sampling plan. It's an adequate sampling plan, but EPA is the lead agency for making the NPL decision or recommendation. Okay.

So that's -- I hope that clarifies it. Your second point, who you can give comments to, seeing as it's DOE sampling plan, we're only trying to make it convenient and less confusing by funneling the comments through a single point. That's one of the reasons I didn't put my e-mail up here as well as Terry's so that we make sure we capture everything. Nothing we capture as a laboratory is not shared with DOE, and, Dick, do you want to comment on that?

MR. NOLAN: Or for that matter with the entire task force

MR. McGRAW: So by giving us the comments, DOE gets them. If you wanted to forward those to someone at DOE at the same time as you forward them to us, Pamela, I would see no problem with that.

MS. SIHVOLA: Department of Energy is the final decision maker; no one else decides which

suggestions are going to be implemented and which are not? It is Department of Energy alone?

MR. McGRAW: But it doesn't -- I'm not sure what we're -- what you're trying to -- the point -- I want to understand the point you're trying to make. I'm not sure what that point is because, yes, the Department of Energy makes that final decision, but it's a collegial process as a team. Dick and I, the way we would operate, I understand he's my sponsor and regulator. If he finally tells me I have to do something, I don't question that. I do it, but the way we work together is it's a collegial process. So we work those technical issues together. Maybe I'm missing something here.

MS. SIHVOLA: Well, the question is how do we guarantee that community's requests are included and implemented, and of course the question became very apparent when the Regional Water Quality Control Board had been excluded from these proceedings and had not been even requested to comment on the sampling plan, although they are the only -- currently the only regulator that has all -- or the Regional Water Quality Control Board is the only regulator -- external agency regulating the Lab that has authority over radionuclide contamination at the site.

MR. McGRAW: Do you want to address that, Ed?

MR. BAILEY: I do not believe that Regional Water Quality Board has regulatory authority over anybody --

MR. McGRAW: At the Lab.

MR. BAILEY: -- at the Lab.

MR. McGRAW: We don't concede that point, Pamela, but I want to emphasize --

MS. SIHVOLA: Let me --

MR. McGRAW: Let me answer. I want to emphasize for the rest of the task force here there's no intent to exclude the Regional Water Quality Control Board. We have comments from the Regional Quality Control Board. Those comments will be reviewed and considered. Also want to be very up front and frank about comments. Not every comment will be incorporated into the sampling plan. That's a commitment that can never be made to you. It will be given. Every comment will be given very fair consideration.

If there's a worry on some task force members' parts that that decision is a single decision from the laboratory, again, I think Dick can attest to the fact that the DOE's technical team has the final

decision on which comments will get incorporated, but it is an iterative comment.

MS. SIHVOLA: I have one last comment regarding this issue. In 1981 when EPA assessed the site for the first time for Superfund consideration, the site was not listed for the reason that there was external oversight at that time. The Department of Health Services had contract under the AIP contract program, and I believe that the Department of Toxic Substances Control as well had some oversight by some rule that expired at the beginning of last year.

The reason why LBNL was not listed was because there was external oversight. At the moment we are in a situation, as Ed confirmed, that there is not one single external regulator that has any oversight over the radionuclide contamination in the ground water, in the soil, in the vegetation, and this is precisely the reason why we have requested the re-assessment of the facility, and by being listed on the National Priorities List, we will be guaranteed to have external oversight by USEPA Superfund division, and also in that process, there's a legal requirement for public participation. So we will be guaranteed to be part of the process until the clean-up is complete. That is the main reason why we have requested the

Superfund evaluation.

MR. McGRAW: That helps. We understand why you did that. I wouldn't agree with your characterization in the 1991 score, but thank you for clarifying that.

MS. DAY: I thought what we were here to do is look at the sampling plan in order to determine whether there's contamination or not. I would not accept the premise that there is contamination out there.

MR. WILLIAMS: I think the whole issue here is credibility, and it seems that we are talking past one another, or we're not sure who is making decisions or who the lead agency is. We're not sure about the sampling plan from the standpoint of measuring the specific things that are of interest to us, and I don't know really how to resolve that.

I think there is a -- we can come up with the best scientific plan humanly possible and acquire and analyze the data properly, and yet we recognize that regardless of all of that, a political decision can be made somewhere in the hierarchy of the Department of Energy or some other agency, and so all this work goes for naught.

It would seem to me if you could answer

questions the public raised directly and simply so that there is record of trust developing, that then we would be able to get somewhere. And one of the things that I had in mind was that the issue that Mr. Williams brought up, Mr. Philip Williams, concerning the amount of tritium that was bought at a specific time, I think the whole point of this -- of that particular request was that when you start measuring tritium emissions, that the facility is operating at its normal rate and not at some very low level rate, and so that to me is a reasonable point to ask.

Now, maybe people are going about it the wrong way in terms of asking what the shipments are because that implies there's trust, but I think it's valid to certainly wonder when we're measuring or taking samples that the facility is operating at its normal rate, not at some low level rate.

Then, secondly, a lot of people like myself are influenced by the California Regional Quality of Water Quality Control Board and so, you know, I've got a letter faxed to me today in which they are commenting on the draft tritium sampling analysis plan, and they raise some points I think that need to be raised, and I have a copy. I don't know how many

other members of the task force have a copy, but here it is, a problem with trust and credibility, and no matter how good you think we are from the standpoint of our scientific plan, I heard someplace that things perceived as real are real with no consequences. And perceiving it as a flawed process, then I think we have to live with that. So the whole issue to me is credibility.

MR. McGRAW: Well, I couldn't agree with you more, Carroll. I think that is it. It's one of the things we're trying to -- that lack of trust is one of the things we're trying to bridge. So we're not going to get there tomorrow, I don't think. I hope we'll get there. All I can tell you is we're going to make every effort and do everything that we can humanly do -- responsibly do to help get there. I agree absolutely it's a trust issue.

Secondly, we take the questions that the Regional Water Quality Control Board has raised very seriously. I don't sense a lack of trust from them. I've talked to the chair of the board, and he didn't indicate that to me.

Thirdly, the request that we've gotten from the community relative to the inventory, we're putting together a detailed answer for that. We're going to

have our technical consultant, Owen, review that. We're going to share that with Bernd Franke. We will also make sure that at the time we share it with Owen and then with Bernd, the community sees that as well, sees that as well we're trying to translate a fairly difficult-to-understand inventory system into a more user friendly format. So we're working hard to bridge that effort.

That's one of the other things we very much like advice and counsel from this task force on is if we share that kind of information with the community in this effort, was it understandable? Did it look like a good faith effort to you? So we need your insight on that, too. So I agree with everything you've said. All I can tell you is we're working hard to fix that.

MS. PACKARD: And my question, will the task force members, all of them, receive the Water Quality Control Board letter, copy of it, to know what question --

MR. McGRAW: There's no reason that didn't happen. So I've actually -- I've only seen those comments very recently, but there's no reason --

MS. SIHVOLA: I have a copy of the comments, and I will be happy to pass them to all of the

members. We are also -- I have Laurie Bright from Citizens Opposing a Polluted Environment, the Panoramic Hill Association, myself, and this is a letter to Director Shank asking him to include the Water Board's comments as well as to ask a representative from the Water Board to be seated at the task force starting with the next meeting.

MR. McGRAW: As I said to you, we will take all those comments under advisement and give them very serious consideration. Thank you for bringing them tonight so you can share them with everyone here tonight, Pamela.

Okay. I think we've beaten this one up a little bit. Can we go to the next one? The other one I teased out of that transcript was -- with lots of help -- was this whole issue of what's this Superfund sampling plan all about? What questions is it trying to answer, and what does all this have to do with the health issue, anyway?

Well, in fact, in a direct sense, the questions we're trying to answer through the Superfund process is only going to indirectly address the health questions, because in fact the Superfund sampling looks, again -- and I would invite Superfund experts to speak up in here, Mike from EPA if I'm

mischaracterizing this -- but Superfund sampling looks at the issue really once removed. It looks at site contamination through direct environmental sampling program. We do, however, remember on the health issue, we do, however, as a laboratory directly confront the public health issue standards or national emission standards for hazardous air pollutions program that is overseen very directly by EPA.

So we address that question very directly through stack sample and modeling, but the Superfund sampling plan isn't directly doing that piece. So I wanted to clarify that so there would be no misunderstanding, or no one would think we've mischaracterized that.

However, the results from the sampling plan can be modified, and, in fact, we're factoring things in that are important to that piece. We're doing some vegetation sampling. We're doing some transpired water that will be valuable data, important to the piece. The sampling is important in answering that question because it does verify compliance with a standard that is a health based standard, and, secondly, the information's essential for updating our information.

We've done risk assessments in the past and

environmental sampling, and it helps us update that information. So it is related, but not in quite the direct sense one might have initially understood, some of you perhaps initially understood.

Finally, we get to maybe the most contentious issue of all is what's the level of operation at this facility?

MR. WHIPPLE: Excuse me.

MR. McGRAW: Yes?

MR. WHIPPLE: Just join in the confusion of which agency does what to whom, my first chance at looking at the Water Quality Board's letter, but not to dispute Ed's interpretation of this whole role, but this reads to me as a letter from a regulator to a regulated party, says you got 60 days to modify or plan the response to our comments and get back to us. I've seen these letters. They're not things that you say, "Thank you for your comments. I'll think about it" typically.

MR. McGRAW: You want to comment on that, Mike? Puts you on the spot.

MR. BANDROWSKI: I don't think so. I'm not sure what exactly the relationship is between Water Quality Board and DHF. I mean, it's a state agency.

MR. WHIPPLE: The tone was not advisory.

MS. DOUGHERTY: I have a comment. I just wanted to comment on what's obviously happening here. If I were a task force member at this moment, I would be really pissed off because you guys can't seem to know yourselves who is being regulated and who is doing the regulating and who is in charge here.

I mean, I feel a little bit like we're standing around everybody going, you know, you guys, I don't know. I don't know. Well, I don't know. That's pretty confusing, so I just want to name that because I think it's pretty crazy making on the task force if that was going on.

MR. McGRAW: You wanted to comment on that, Ed?

MR. BAILEY: I don't know whether I want to. We have a rather confusing situation, I'll admit. My understanding is that Atomic Energy Act, radioactive materials, except for air emissions under NESHAP regulated by EPA are under regulation by the Department of Energy as a self-regulating agency.

Therefore, California Department of Health Services, Life and Health Branch has no authority to regulate Lawrence Berkeley National Lab, which is a prime contractor of DOE. So to use a hyperbole, they can do anything they want on their site, if they're --

as far as our authority to make them change that, once something gets off site, then we have a little different argument about whether the State has jurisdiction over releases from DOE facilities that are not on DOE property.

MR. McGRAW: So in that -- that's the way we interpret it, but I want to make another point. So we see the regional Water Quality Board's authority in the same context, they can write the letter whatever tone they wish. The fact of the matter is we'll be responsive. That's just not the way we do business, and I think EPA and Department of Health Services will tell you all, members of the task force, that the track record of the laboratory is that we've always been responsive to regulatory agencies.

We've never taken -- hidden behind this issue of well, you have no authority here. We've said we would like to work with you. What are you trying to accomplish? How can we help you accomplish what you need to for your stakeholders? Let's get there. So the fact of the matter is we'll take the Regional Water Quality Control Board comment seriously as if we were any regulated entity in the state.

MS. SIHVOLA: For the benefit of the task force members, I wanted to point out that already in

1994 there were data collected which indicated that the ground water tritium plume had already exited the laboratory boundary, and the way the Laboratory decided to deal with it was to move the boundary further south, and it was done with a special agreement that the Regents signed in September of 1997, and the boundary at the southern end of the tritium plume was moved several hundred feet down the hill so that the laboratory can continue to say that the plume is contained within the facility.

MR. McGRAW: I think I want to respond to that.

MR. LAVELY: Want to ask a question because this is a very important issue that I can't let it sit out there, and Iraj may wish to address it as well. We're truly, Carroll, at the trust issue here again. In fact, that's not the correct interpretation of why the fence was moved. So here's our challenge.

The fence was moved to assist us in doing a more effective job of vegetation control for fire perimeter control. So no good deed goes unpunished, perhaps, but it was to do better perimeter control for fire suppression.

MS. SIHVOLA: My second question is why do you --

MR. McGRAW: Let us do this in a respectful way.

MR. JAVANDEL: Pamela mentioned in 1994 we knew that we had tritium plume going outside. I want you to bring that data next time to this meeting so all of those know that and prove to us that that was the case because we don't want to hear some claim without any proof.

MS. SIHVOLA: Well, there was a technician that worked in your division by the name of -- sorry -- Susan Monheit, and she collected transpired water vapor samples around Building 31 in the summer and fall of 1994, and I believe that the transpired water vapor samples within the vicinity indicated that the tritium contamination had already reached the site boundary.

MR. JAVANDEL: There is no connection between the transpired water and the ground water contamination. I'm an expert in ground water contamination internationally, not nationally, and I can tell you that that is not true.

MS. SIHVOLA: I said --

MR. JAVANDEL: She is not --

MS. SIHVOLA: I said contamination. I didn't say ground water. I said contamination had existed on

the site.

MR. McGRAW: So that we can move on, let me commit to share any of the data the task force would like to see, and we have -- I think we do have a trust issue here with the task force members. We'll share that data you would like to see, so that I can move on, get through this, but I want to honor Paul's question.

MR. LAVELY: Well, two things. One is that sometime I believe in 1993, I was the person who was doing the contract with vegetation management at U.C. Berkeley, and I can tell you that in 1990, '91, '92, the boundary between the University property and the Lab's property were continually being re-evaluated for no other purpose than for fire control and fire mitigation issues.

I know that I burned up one of the fences doing a controlled burn, and our people were doing that, people under contract to us, and -- in the School of Forestry where we're doing that. And at that time, 1994, I didn't even know that there was a tritium issue involved with this. 100 percent of the work that I know of that was done of moving boundaries was done for fire control and fire suppression, and we coordinated it ever since.

They happen to be in environmental planning rather than in the Office of Environmental Health and Safety, but it's still -- as far as I know, the only difference is they've added the overlay issue of looking at the amount of tritium that might be in controlled burn or in products that are removed, cut down, and samples are taken to determine what amount of tritium is there.

But, David, a different question before that issue came up, and that was that I get the feeling that some people might believe that if the person, organization, group agency isn't seated at this table, that there's no other people making comments. It's not correct. As I understand it, you have other people than are here making comments on the plan.

MR. McGRAW: Absolutely.

MR. LAVELY: So I guess the question I have is do we therefore need to include every single person who is going to be giving comments on this plan at this table?

MR. McGRAW: It's, of course, not possible. The issue that was raised is whether the Regional Water Quality Control Board needs to be included. I think that's an issue that the laboratory and DOE should consider. I'm not committing here tonight, and

I can't make that commitment. That's something I need to discuss with DOE people, my management, but I think it's worth taking that as under serious consideration, but absolutely we can't include everybody makes a comment.

MS. EVANS: So I'm wondering if you have any insight as to why you might have gotten such a letter from the Regional Water Board. Is it because they've been included in a wider group of commentors of your plan?

MR. McGRAW: I think Mike can answer the question.

MR. BANDROWSKI: Prior to this work group, there was a Tritium Issues Work Group, and the Water Board, we invited them. They didn't come to the majority of meetings for whatever reason, but toward the end of the work group process, we did have a representative, and it was -- at that time, the sampling plan was being completed, and we sent everybody who ever participated at any time in that Tritium Issues Work Group a copy, and so they received it and sent their comments in like a lot of other people.

MR. McGRAW: Is that reasonable, Pamela? Does that address your issue?

MS. EVANS: (Nods head.)

MR. McGRAW: Okay. What's the level of the operation at the NTLF? This is the question up there now. This is a very contentious issue. I want to make sure that everyone listens to the next thing that I'm going say. I'm going to put up some information. It's incomplete. We're going to make a leap of faith here, Carroll, so we're going to maybe widen the trust gap, but I hope I'll be able to close that gap very soon if not tonight.

So I'm going to put up some information about activity that's incomplete, so everyone hears that it's not being represented as complete. It's also information that I really need to have your attention, have you listen to me, make sure you're understanding what I'm saying. It's not technically difficult at all, but here's the level of activity, and I want to define the word activity at the Tritium Labeling Facility over the past several years.

Now, what do those numbers mean? Those numbers mean projects. They don't mean tritiation reactions. All right. And we may or may not want to, tonight, invite Phil to address this. We can certainly address it at another time, and we are running a little late of the time, but this is being

presented to you as a good faith effort to close some of that trust gap.

So for the past several years, these are the facility, the tritium facility projects on this reporting year, and that's NIH's reporting year. I'm pointing that out to you because I'm going to give you some other data as an overlay that's on a slightly different time scale. So you'll see the two charts.

What does a project mean? It means some user coming into the facility. 35, does 35 projects mean 35 tritiations? No, every tritiation reaction is different. Every project is slightly different. What I can tell you -- although I haven't re-built this data set completely -- is that the average tritiations, as I've gone back -- and I'm not all the way back. That's why this information is incomplete -- is about three to four tritiations a month.

So what this tells you is that the facility has been operating at a pretty normal rate all these years. The projects were fewer in a year that we interrupted tritiation activities for a period of a few months.

Now, if I overlay on that a chart that shows you the emission levels during that same approximate time period because the projects were over that NIH

reporting year, the emissions are done on our calendar year. So you can see the little offset of the time. Our emissions have truly been going down. Even the activity's about the same.

Now, we had a little blip in '98, and we've been very up front about what is -- what that was. That was an emission from the treatability study. About half of that we could associate with the treatability study. So we truly are getting better at what we -- how we manage and control emissions in that facility, and that's, of course, our goal.

Now, Mike Bandrowski has also shared with the community -- I think I had a quote from his letter on the previous slide, that from their split sampling project with us, they cannot see any evidence that we're not operating at, quote, normal capacity.

Now, what's the maximum activity we could be doing in there? Only Phil can answer that definitively, but I can tell you that they're not allowed to have above a certain amount of tritium as a source -- the amount of tritium on a uranium bed as a maximum. That's one limiting factor. Now, could one break that limiting factor? Could Phil accommodate more users? Probably, but you can see that his users have been pretty consistent.

MS. SIHVOLA: Do you include in all the projects each of the oxidation of the mixed waste treatability study samples?

MR. McGRAW: These are projects associated with users. Each of those projects will have some waste challenges associated with them, Pamela, just as each of those projects will have different tritiations in some months, and some projects it will require three or four tritiations, and other projects it will be different.

I can't tell you that every project is 1.5 tritiations. I could average it out, but, in fact, it does go up and down. The point in showing you this, it's been -- we've been remarkably stable in our activity

MS. SIHVOLA: The index that the community has used regarding tritiations has been a very simple one, and we had obtained shipping documents for each of the tritiated product shipments since 1982 to August of 1997, and the community simply asks if a continuation to receive the shipping documents for the remaining years in August of '97 through the present time. You don't need to go through complicated analyses and research. We simply request the copies of the shipping documents for each of the tritiated

product shipments that have been sent out to the users that have come to the facility to tritiate their compounds.

MR. McGRAW: Well, first of all, you're going to get inventory information shortly, Pamela. You may not get all the shipping documents with users' identifications on them because there's an issue here of trust with our users, too. So I won't commit to that, giving you that information. I will commit to giving you and Bernd and Owen absolutely detailed inventory information.

MS. SIHVOLA: Nothing else will be acceptable except the shipping documents as we had received in the past.

MR. McGRAW: I hear you. Thank you for making that very clear.

MR. FRANKE: Can I slip in one moment, David?

MR. McGRAW: Bernd, I was looking around to see where the voice was coming from.

MR. FRANKE: Coming from the sky. I cannot see what you put on the overhead, but can you tell us in reference to what Pamela is talking about, I think it's a reasonable question to ask what the total activity is in the samples projects which are conducted.

MR. McGRAW: You will be able to see that from the inventory information that I'm going to be sending out in the next few days, Bernd, and that's coming your way. You will be able to see it.

MR. FRANKE: Does it include all the projection as to what the activities carried out this year and the next year are going to be?

MR. McGRAW: The projections for next year I don't think are on that list we're giving you, but you'll see it in detail all the way back to '69. From this --

MR. FRANKE: But the answer to the question some member of the community asked as to what is going to happen during the time the sampling is being done, can you tell us about plans to have similar numbers of projects and similar amounts of tritium -- the facility's end of projects?

MR. McGRAW: If I understand your question -- I didn't hear it all, so let me repeat it. You want some assurance that as we move forward in sampling that the sampling is going to be done in a -- against an activity level that's characteristic of historical activity levels that I've just shown up here on the board. Is that your question?

MR. FRANKE: That we have both views of

information that make an informed judgment.

MR. McGRAW: The answer is yes. We, in fact, had discussions just as recently as this afternoon amongst a small group of us to make sure that our activity -- Iraj, Ron, myself, Gary Zeman, Akhilesh -- to make sure our sampling plan as we go forward is satisfactory in that respect.

MR. FRANKE: Let me clarify the information we will receive will tell us how much activity is with the product shipped out.

MR. McGRAW: We will keep our inventory information up-to-date, so you can assure yourself of that, yes.

MR. FRANKE: Okay.

MR. ARENS: I'm Eric Arens, and I'd like to ask about -- if you put that back up again, plot. I don't see any correlation in between the two trends. In fact, the lowest point on the red bars is up near pretty high point on the blue graph, and the two pink bars next to the lowest point in the low also, so that you have a year, half year of delay. I mean, is there any purpose in showing that?

MR. McGRAW: You've asked a real -- a very good question, Eric, and one of the reasons we debated even using this, and I decided to go ahead, and that's

why I put those, though there's a leap of faith, and maybe this will generate some distrust, but we hope not because each of those there is variable because each of these projects involves different kinds of chemistry.

And so it may -- tritiation was the source term was different than the next tritiation. It may be more complex chemistry. So the reaction vessels are there longer. So there is some variability.

What I was trying to show here in a general sense, not a disciplined quantitative sense, was our project activity is remarkably consistent. We are doing within that consistent project activity over time. We are doing a good job of keeping the emissions within one to two percent of the standard.

What I couldn't do in this scale was show you these numbers are between two, one and two percent of the standard with some variability because the reactions are all different. The chemistry's all different, but these numbers down here are one to two percent of the standard. So I was trying to address the issue.

The reason that's been raised in the past, the reason you folks up at the tritium facility are one to two percent of the standard is you're just not

doing any work. That's what this is intended to address. We are doing work, and we're doing work that's consistently representative of what its previous work has been.

MR. FRANKE: Can I ask another question?

MR. McGRAW: Yes, Bernd.

MR. FRANKE: I'm sorry to interrupt. The shipped products about five to ten years ago were in the hundreds of curies per year, yet the last couple years, as far as what I received from your Lab, tritium products shipped out amounted to roughly five to ten curies. Could you explain the difference?

MR. McGRAW: Without that information in front of me, I would be taking a shot in the dark, and on an issue that's this important, I don't want to do that, but what I do want to do is capture your question in the transcript so that we can address it in detail, and we'll share that with the -- that answer to the task force. I'm sorry, Bernd. I'd be really shooting in the dark there.

MR. FRANKE: Fair enough.

MR. LAVELY: Couple of times you said that those are -- the lines in red would be indicative of one to two percent of the limit. No, not really. None of them are above two percent, and some are much,

much lower than one percent.

MR. McGRAW: Right, you're right. Thank you for clarifying. Not between one or two. It's all below two.

MS. SIHVOLA: David, would it have been very hard to put a graph there that would simply show how many tritiations using tritium there have been since 1997 to present, not including all of the other projects that do not include tritium?

MR. McGRAW: No, and we're putting that information together, and, in fact, I could give you that information for 1999, but the issue that you want answered is that you want the whole time period.

MS. SIHVOLA: Since August of '97.

MR. McGRAW: So I do have it for '99. That's why I said it's another part of the incompleteness. Should I put this up or not? But I wanted to put it up to bridge this trust issue, to address this issue. We'll finish doing the tritiation counts. I can't commit to giving you people's names, but I'll do the count. Thank you for reminding me of that, but I intended to do it. Okay.

So I want to close, and the facilitators are telling me to do that. I want to summarize sort of where I thought we were at relative to the sampling.

remember, we've sampled for years at the laboratory. We have sampled in many different media. The current program doesn't meet the CERCLA standard for data quality objectives.

Now, this is one of the reasons perhaps besides the request from Citizens to Minimize Toxic Wastes that EPA said, well, let's look at some of these things in a new sampling plan with CERCLA data quality standards. We've been doing this for years. We continue to do it right now. So not that we're doing any sampling. What we're looking at is giving EPA some information in these areas to the new standard, and then we've also included requests the EPA has not asked for to satisfy community concerns.

My point in putting this up is I wanted to make sure we understood. It's not that we've never sampled. It's not that the new sampling plan's going to be something distinctly different. It's that the data quality objectives will be a little different and that the plan is flexible. It can change, and that's why your input is important.

Finally, the last question I had up there is we have done scenarios relative to fire where our entire source term of tritium is released. So if we had a fire like Los Alamos, we've already modeled and

done those calculations, what would happen if all that were driven off a uranium bed. I've also asked my staff recently to look the references from the Los Alamos fire to see if there's any vulnerabilities we haven't thought of. So with that, I'll close so we can move on, and I'm happy to stay and answer questions.

MS. DOUGHERTY: Thanks, Dave. What I want to just comment for one second is just remind ourselves that one of the things I want to -- different ways make you guys -- make sure your comments get included. As I heard David, you said that they would be -- comments will be culled from the meeting transcript, number one, which will include the public comment as well.

Number two, you are invited, each of you as task force members are invited to please submit written comments to the plan as it stands right now or to any future plans, iterations thereof, and remind yourselves as well that you can use that website that was posted earlier, and you're all welcome at any time to post any comments you have on that website that was mentioned earlier.

Okay. So as a simple segue to move forward here, if you guys will look at your agendas -- or

Fran, did you have something?

MS. DUFFY: Fran had something. You want to bring it up?

MS. PACKARD: Yes, David, just to make sure the difference between the current and ongoing program, and what's proposed in this plan is sampling methodologies, testing methods, quality examples. I mean --

MR. McGRAW: It's a little bit of all that, and Ron.

MR. PAUER: Iraj might want to give you more precise answers than I'm going to give. It's things like where do we take the sample? What's the consistency of the methodology? Does the change of custody requirement meet the CERCLA standard? Does the air that we're going to accept the variability between samples? When we say it's essentially the same number, does it meet 95 percent confidence limits, lower, higher? It's those kinds of things.

MS. PACKARD: And does anybody sort of comment on so is any of your current data usable? I mean, should we have confidence in whatever we see is my question.

MR. McGRAW: I think Mike Bandrowski should answer that. We think that EPA should have lots of

confidence in our current data, and that it was -- it answers many of their questions, but they -- once they start to make a decision relative to NPL, they put themselves into the data quality management objective they're bound by. Mike, you may want to answer this more directly.

MR. BANDROWSKI: I guess I would just say as far as reporting on NESHAPs, we have confidence in the data. I wanted to comment on these three documents I had, which partly answers that question. So maybe when you're ready for me to mention what I have here, I'll refer --

MS. DUFFY: If it's relative.

MS. DOUGHERTY: Got a couple things to say. Mike, you need to -- Eric's asked to make a speech. Anyone else on the task force that needs to speak for a brief period of time? Any of the rest of you? Okay.

MR. NOLAN: I'd like to, when the right time comes, I'd like to comment on Fran's question as well.

MS. DOUGHERTY: Let's do that now, and then Mike and Eric -- I'm sorry, Pamela.

MS. SIHVOLA: I want to say something about the sampling later.

MS. DOUGHERTY: All right. Great. We'll

hear from Dick. We'll have Mike's comments, Eric's comments, Pamela's, and then we're going to go forward to agenda item number four and five on your agendas, which are basically in the middle of this conversation about the task force comment process and about the sampling plan and where we are. We're going to go forward and please start with Dick.

MR. NOLAN: Fran, just amplify perspective on your concern about the credibility of prior sampling activity and ongoing sampling activity, the Department of Energy requires the laboratory to conduct the regular sampling program, of course, and this kind of sampling environmentally has gone on for years and years and years.

We produce an annual environmental monitoring report, and that report and those activities leading up to it are routinely quality checked by the department to ensure that the data is correct, and so in addition to the data and sampling results that Mike might want to comment on in interest of the EPA, the department insists that its contractor, the University, perform a quality program on an ongoing basis in producing samples.

MS. DOUGHERTY: And, Pam, you had a question.

MS. EVANS: Thank you. Yeah, Pam Evans. I'm

a little confused about the chart, the very last one that you showed, Dave. The current proposed program, and then you have Superfund and community concerns is the last two columns, and you have checks in a couple of categories, but I think I heard more sets of concerns from the community and task force members about other categories of sampling besides just where you have the checks.

MR. McGRAW: Thank you for clarifying that. I thought I said at the end -- and the chart -- you're right. The chart does not show this. One of the things I tried to say at the ends is the plan is flexible. So it's not bounded by what we've said here. Does that address it?

If there's other things that the task force would like to see us include that's accepted, we want to listen to that. What I've tried to show on this chart was we have included things that EPA has not asked for us to -- the two check marks you see on the far right, but this chart as constructed is not a bounding of what we're willing to look at.

MS. DUFFY: I said that's one thing we're going to talk about tonight after we hear from --

MR. BANDROWSKI: Last meeting people had raised some questions, and I wanted to respond to a

couple of things. I put together a couple of handouts, and I guess the first one addresses some of the issues about what Superfund wants and what EPA wants out of this, and it's a letter from Betsy Curnow to Herman Patel, and said there's been ongoing data that's reported in EPA '93 NESHAP program for quite a number of years, and we have confidence in that data. We don't have concerns there.

The issue came up when the community asked that EPA look at the site for possible listing under Superfund. We looked at all the data that we had available, Superfund people did, and they determined that the five items that are listed in this letter enclosure one are the items that they need in order to complete that assessment in order to determine whether or not it could be listed under Superfund.

So, you know, as to what EPA is looking for, these are the things that Superfund officially asked DOE to provide, DOE being the lead agency over the Lab. The Superfund program determined what data they needed in order to complete that assessment, and they asked DOE to provide that data.

And, of course, DOE has to develop a sampling plan, and we wanted to take a look at and asked them to have the community look at it as well to see if

there was any additional things the community might want beyond what EPA needed in order to complete its assessment. So hopefully that provides some answer to that question that was raised.

The second thing that I gave people was there was a question last week when I mentioned a couple of times NESHAP has a risk associated with three times 10 to the minus four, and people asked for a little background behind that, and so I had Shelly Rosenbloom of my staff go back to the original federal register notice for the NESHAP itself and just provide some of the information on where that three times ten to the minus four comes from as a 70-year risk, and you can read this here.

Owen did mention to me that since the time the federal register came out in 1989 that risk has changed a little bit. It's now I think he said five times 10 to the minus four, but I had to ask Shelly to look at the original NESHAP. So we can update that if people would like so that's where that number comes from, and then, third, Pamela, at the end of meeting last week, asked that I be sure to respond to her letter that she passed out to the work group that she wrote to me, and so I just wanted to make sure that you guys had a copy of that, my response to Pamela's

letter. It's included in the pile I put in here.

MS. DOUGHERTY: Those are all three that you --

MR. BANDROWSKI: That's it.

MS. DOUGHERTY: Does anybody have any questions of Mike? Okay. Eric, would you like to do your presentation?

MR. ARENS: Hi. I'm the new president of Campus Parnassus Neighborhood Group. That's the neighborhood adjoining LBL on the north side near in Highland, and the group asked me to come to the meeting a month or so ago this meeting, and I did so and I've also looked at some of the documentation that's been issued by the various people on this tritium matter. There are some aspects of the tritium matter that have not been addressed, as far as I can tell, one is why are there any emissions at all, and why is -- there is a stack, and why is the stack on the down side of LBL?

I wrote these questions down on a piece of paper, and I will ask to have these handed out after I get done speaking. I only made 20 copies. My copier was not so good.

Then there's the matter of records, and the records are incomplete and looked at some of the

correspondence going on about that. I wrote that down and wrote some comments down on a sheet of paper also, and I'll ask for that to be handed out also. After I did that, I put together a third paper that explains what this tritium -- what the amounts of tritium and what the amounts of radiation are in terms of units of people can understand and what effects it has on people.

The units like pico curies don't mean much to most people, and so -- and so I did a calculation. I did several calculations, actually, and there are uncertainties in the answers because there are uncertainties in the input to the calculations. And I have listed some of these uncertainties. Also, the calculations, the results of the calculations could be higher, could be lower. So have to look at the list of uncertainties and see whether it might be done better.

In order not to take up more time at this meeting, I'm asking that these three papers, if you pass this out also, that the three papers be included in the record of the session and passed out to other people also who cannot be here but are interested in the proceeding. There are some questions in these papers, and I request they be answered, or at least

addressed at the next meeting that this group has. Thank you.

MS. DOUGHERTY: Thank you.

MS. DUFFY: Thank you.

MS. DOUGHERTY: Okay. Let's take a look at our agenda for a second, catch up. I've got ten minutes after 8:00. So we've got a lot to do in the next 50 minutes. We're really looking at agenda items number four and five, sampling plan, and we're talking about the sampling plan summary, where we are, what's going to be the next steps, and that's sort of where we left off last time, some of you will remember.

When we were summarizing what you guys came up with in that last 15, 20 minutes for the last meeting, we noted there were some questions that you guys or some options you guys had put on the table, and we wanted to refresh your memories a little bit as we recalled them. We also examined the transcripts -- yeah, and transcripts, and so what we wanted to do first of all is start to -- the most obvious thing is which is ask you do any of you have comments today right now on the sampling plan? Would you like to raise your comments, leave your comments? Oh, Pam, sorry. I -- pardon me. Apologize.

MS. DUFFY: It's relevant.

MS. DOUGHERTY: You also wanted to speak, didn't you? Okay. Please, I'm so sorry. I interrupted, didn't give you a chance to speak. Let's try to keep it as brief as you can.

MS. SIHVOLA: I consider this maybe just an introduction to the sampling plan discussion. I am going to hand out a tritium LBNL sampling plan that was implemented at the facility under power of the Environmental Health and Safety division in 1996. Dr. Leticia Menchaca was a scientist working at the laboratory at that time and did extensive tritium monitoring at the laboratory, including vegetation, and this is a very splendid pilot study.

She took a 300-meter radiation using the stack as the center and sampled 25 trees for organically bound tritium as well as tissue free tritium in the biomass. Her conclusions are in this study. Her organically bound tritium concentrations were very high, and I would like to hand this study to everyone. I would like all of you to look at it because it will give you an idea what a tritium vegetation sampling plan might look like.

Her conclusions indicate that tritium found predominantly in the west and north of the Lawrence Berkeley Laboratory within the 300 plus meter radius,

and I believe there is no need to go and look for tritium outside that area, and but at the same time I will say that this sampling plan should be included for review since it did indicate the conditions at the site in 1996, which was already about a year after the Tritium Labeling Facility had been shut down.

So this is a very interesting study. I hope you will all look at it very carefully, and I have a question actually regarding the organic -- the significance of the organically bound tritium concentrations that were found at the bench line or close to Lawrence Hall of Science, and we would like to have somebody from the laboratory to answer why these organically bound tritium concentrations are higher than what has been found on site at the Savannah River site and Hanford, and why tritium rain water samples that were measured in 1994 by Susan Monheit are higher that were measured at the (Unintelligible) nuclear power facility in Germany.

So we have great concern and many, many questions about the organically bound tritium concentrations measured at the laboratory in '94 and '96, and we would like to have initial answer to these questions. Thank you.

MS. DOUGHERTY: All right. I don't know if

the folks in the Lab had a comment back to Pamela, want some time to think about this, or how do you want to deal with this?

MR. McGRAW: We can comment in detail so that we can share after we review what Pamela is handing out. I don't like to comment on something I haven't got in front of me and haven't had time to reflect on. We've had some dialogue with Pamela on this material in the past, so I think what would be useful would be for us to respond formally and share it with all the task force members.

MS. DOUGHERTY: Keith, did you have something?

MR. MATTHEWS: No.

MS. DOUGHERTY: So let's -- to go back to my earlier question, do any of you have comments right now? Pamela shared her comments as if a sample potential way of dealing with a piece of the study. And --

MS. SIHVOLA: It is to include the existing data for this study that I handed out that the review of this data should be included in the -- in the EPA review.

MS. DUFFY: I just want to note Sherillyn and I aren't writing them up on the board because we know

the transcript is capturing it better than we could.

MS. DAY: The data Pamela just gave, is there a citation on where this appeared?

MS. SIHVOLA: This study was done under direction of Ron Pauer, who is sitting right down the table from you. He is the head of the environmental protection, will issue a -- Dr. Menchaca worked under Ron Pauer, and the purpose of her study was that it was supposed to be included in its entirety at the 1996 site environmental report, but for reasons unknown to us, unknown to the community, this scientist was dismissed from the laboratory. She lost her job, and her study never appeared in the site environmental report as it was intended, and the data was received only after the Berkeley City Council requested for this data.

MS. DUFFY: Were you asking which published -- she is asking if it published.

MS. PACKARD: It looked like something that may have been published in a magazine. So I was looking for a volume, but this is just something turned in as a contract or part of her contract that she had?

MS. SIHVOLA: No, she was a staff scientist at LBNL.

MR. McGRAW: I would like to respond to that. She was a term employee. She was not a career employee. Her term was extended a couple of times to finish some projects. This material was not peer reviewed in detail. It has not been published anywhere. We would be happy to review it and respond in detail. It's not been published in any journal. She was not a career employee at the laboratory. She was a term employee.

MS. DOUGHERTY: What does that mean?

MR. McGRAW: A term employee is someone who is hired for a term, certain period of time. It's usually a year to two years, and they work on specific projects. And it's been very clear to the employee when the appointment is made that this is not a career appointment. This is not something we can guarantee can be extended.

MR. WILLIAMS: So this is a report -- this is a report that has not been submitted for publication.

MR. McGRAW: It's not been submitted for publication.

MR. WILLIAMS: But it's a report now in your files?

MR. McGRAW: Well, it's not an LBNL report. In fact, it's not made up in the format of an LBNL

report. One of the difficulties with organically bound is we're the community, the tritium community, and this is something our new health physicist is going to be very useful in helping us review because he is a real tritium expert, but the tritium community still is struggling with organically bound tritium to do in a standardized methodology that the regulators would agree as meaningful, meets their quality standards that people doing the work at various sites around the country would agree it's repeatable, and the reliability in the sense that the certain methodology will give you reliable and consistent results.

So it's something that Pamela submitted in request to -- in response to a request from Ron Pauer because we thought it would be interesting to look at organically bound tritium, but at the time this work was done, we were all struggling with what standardized methodology for that should be. This was never peer reviewed. It was never issued as an LBL report.

MR. WILLIAMS: Are you questioning its value?

MR. McGRAW: No, we're not. Just in the press of many things to do, this was one that was not going to be immediately useful in a regulatory sense.

It's certainly something that we're going to do more of in the future. There's nothing wrong -- I'm not suggesting there's anything necessarily wrong with the work. Okay.

MR. PAUER: I just wanted to mention that because of the concern for organically bound tritium is it is a proposed sampling plan right now. So it's there. Everyone can look at, review it, decide whether or not it's appropriate.

MS. DOUGHERTY: Thank you.

MS. DUFFY: Does that answer your question? I'm not sure.

MR. WILLIAMS: Well, I'm satisfied for the time being.

MS. DOUGHERTY: Is there a clear protocol? I'm not clear on whether or not there is a protocol for this, for gathering this data. Does anybody have an answer to that?

MR. McGRAW: Well, in fact, there's not a widely agreed on protocol. The person that we've just hired, Dr. Trivedi -- I don't know if Akhilesh is here tonight. Akhilesh, you want to stand up so everyone can have a look at you and they'll recognize you in the future?

Dr. Trivedi has come from Chalk River in

Canada. He is a tritium expert. He has just recently published an article on organically bound tritium, tree ring study that was done in Chalk River. One of the things we've discussed this afternoon is some of the confusing data you get from organically bound tritium, for example, and he will be happy to talk to some of you off line on this.

It looks like organically bound tritium studies may be useful in the tritium area. It is probably not very useful in other areas, like carbon 14, and this probably has to do with the carbon source plants use versus how tritium is fixed in plants.

So there's a lot of unanswered questions. Carroll, you asked about what the dynamics are of organically bound exchange of tritium and other radioisotopes, and it's an area we are going to explore and do more work in. It is in the sampling plan.

MR. WILLIAMS: You brought up the example of the Los Alamos fire. Is there any possibility that this organically bound tritium in vegetation is, if exposed to fire, would volatilize and become a pollution hazard in some form.

MR. McGRAW: If there was enough tritium in the vegetation and there was a fire, the potential is

there. We don't think there's enough tritium in the vegetation. We've done some projections of what -- actually, we haven't done if it was released from the vegetation. We've done it if we release the whole tritium bed.

The simple answer to your question is if there was enough tritium fixed, depending on how the plume was dispersed, there's that potential. We have no evidence of at this point there's that kind of a tritium loaded in the vegetation, but, again, that's an area that we intend to look at.

MS. DOUGHERTY: Okay. Let's see if we can gather any other comments.

MS. SIHVOLA: I have one comment about this issue. If it would be possible for the Laboratory's new specialist to answer this question. I have a U.S. geological survey research paper regarding tritium that was measured, organically bound tritium at the Savannah River site, and the concentrations on site at the Department of Energy Savannah River site are lower than the organically bound tritium concentrations at Lawrence Hall of Science here in Berkeley, and I would like to get an answer from the Laboratory's specialist regarding what does that mean.

MR. McGRAW: We will look at your data.

I'll commit to the task force people that Akhilesh will look at your data, will contact the people that did the work at Savannah River and the other site you referred to and will give you his analysis.

MS. DOUGHERTY: I'd like to make sure -- Paul, please.

MR. LAVELY: Could I ask what the whole report is?

MS. DOUGHERTY: I'm sorry. Paul, would you repeat that?

MR. LAVELY: Could I ask what the full report is? It says, "LBNL will provide the full report for our review." What's the full report?

MS. DOUGHERTY: Which document are you --

MR. LAVELY: The one that Pamela just passed out.

MS. DOUGHERTY: Pamela, I think that's addressed to you.

MS. SIHVOLA: What are you addressing?

MR. LAVELY: The second paragraph from the top, the last sentence, "LBNL will provide full report for our review."

MS. SIHVOLA: Okay. I will read this so it is on the record. I am asking that the task force will invite Dr. Menchaca, who is the author of this

study, to come and address this body as well as to give a brief presentation and talk about sampling. She is an expert in designing sampling plans as well as implementing sampling.

So we are asking her to be present to answer questions, and then I also would like to direct my question to David McGraw that LBNL will officially provide the full report for our review that she was asked to leave at the laboratory when she left.

MS. DOUGHERTY: That's your request, Pamela?

MS. SIHVOLA: And that's answering what Paul asked.

MR. LAVELY: Didn't she make a presentation to and you say that a full report hadn't been completed?

MS. SIHVOLA: No. This is a different -- that is a different issue. This is a very specific sampling plan and implementation of a plan that she did under Ron Pauer, and there is a full report that she wrote that was left at the laboratory before she was laid off.

MR. LAVELY: Ron, do you know where the report is?

MR. PAUER:: No, I don't, but we've been asked this question before, and so what we've done is

we have gone through all our files and pulled all information with respect to this kind of sampling. And it was quite a bit of information and provided that to the members of Tritium Issue Work Group about three years ago. It's already been done.

MR. McGRAW: I think that's important for the task force to know Leticia did come and present to the Tritium Issues Work Group the same question. The same report was addressed, and Ron has answered that, that we found no finished report. We shared all of Leticia's files and data with the Tritium Issues Work Group. This is a -- if the task force would like to see all the data, we would be happy to share it with the task force.

MR. LAVELY: And also there's a videotape of the Tritium Issues Work Group, which both Ms. Monheit and Ms. Menchaca presented all of this document, and it's available from the City Council if anybody wants to see it, which they go through an exceptional amount of detail as to what they found.

So if that -- that information is available if you want to see it. I guess the question is if it's already available means that you can look at it at your leisure. I don't see what advantage it would be to repeating it again.

MS. SIHVOLA: I didn't mean -- the full report is not much longer than what you have in your hand, but I wanted to have it delivered by the laboratory as it was left at the laboratory in 1996.

MR. LAVELY: But they can't provide --

MS. SIHVOLA: As to the findings, you haven't reread her study. So the question is how do you answer her findings. And specifically regarding organically bound tritium, what do the high organically bound tritium numbers mean?

MR. LAVELY: I'm trying to answer her study. What I'm trying to say is LBL can't provide something that they can't identify. We've gone over this many times in the past. You're going to need to identify a little bit more fully than the full report, and, you know, I don't -- if this is -- if this is the full report -- is this the full report? I mean, what's the full report?

MS. SIHVOLA: I think you need to ask Dave McGraw. It was left at his office.

MR. McGRAW: The only thing that was left at my office was a Master's thesis by Susan Monheit that's been shared with you in the past.

MS. SIHVOLA: Yes, but --

MR. McGRAW: And, in fact, the other material

you're referring to there is no formal report. I recall Leticia making the comment at the City Council meeting there's no report in that context. There is data she left at the laboratory that's been shared with you.

MS. DOUGHERTY: Wait. Wait. Wait. Wait.

MS. SIHVOLA: -- context to the data.

MS. DOUGHERTY: Wait a second. Wait a second. What I wanted us to do is get back on track for a second.

MS. DAY: I've been listening to a lot of different pieces relating to sampling, and it occurs to me that I may be the only one in this room, but I'm extremely naive on how many different ways can we pick up tritium if it's out there in the environment? How much is it? Is it bubble form? You breathe it in, so does it absorb through your skin? Just don't know simplest things. Can we look at some of that?

MS. DOUGHERTY: Owen?

MR. McGRAW: One of the things I'd like to suggest is Owen is getting a microphone and just park and thinking about, while Owen's making his presentation, if that's something the task force in general would like to hear.

I think when we come to the asking the

question at the end of tonight's meeting where do we go from here, one of the things we may want to do at our next meeting is have a couple of experts or Owen come and talk to us about that very question.

MS. DOUGHERTY: Bernd, are you still there?

MR. FRANKE: Yes.

MS. DOUGHERTY: Just wanted to check in.

MS. DUFFY: Wanted to make sure you didn't fall asleep.

MR. HOFFMAN: So, basically, Bernd, I'm volunteering to give a very short response to the question that was just posed, which is how is one actually exposed to tritium, and basically tritium is radioactive form of hydrogen. It behaves just like hydrogen, and it's most biologically available when it attaches to a water molecule, and then what we get is basically tritiated water vapor.

As such, it can be inhaled. It can be absorbed through the skin. It can be taken into food products and ingested. It can be taken in rain and incorporated into water and can be consumed either through skin absorption, by rain in the water, or by direct consumption. Radiated water, once it's in the body, it labels every molecule in the body that's labeled with hydrogen and the organ -- the molecules

that are -- that interact with water, the residence time in the human body is about 10 days.

So half of the tritium that you have in the body on the average will be lost in 10 days. If you exercise a lot, it will be lost much faster than that. If you don't exercise much, may be a little bit longer. So it's different from person to person, depending upon activity level and temperature outside and how much fresh water a person drinks per day. The material that's organically bound stays a bit longer in the body. Some it's over a period of years. But usually the amount of tritium in the body is much more associated with water than associated with organically bound material.

For health effects, now, I've seen a lot of literature, and a lot that tritium causes all kinds of nasty end points, but the only thing that I'm aware of is that tritium is radioactive and has radioactive substance. There is radioactive energy deposited in the body, and the prime health effect of concern, especially at the levels we're talking about, is the increased risk of cancer and because it labels every molecule in the body, breast cancer, cancers any site, breast cancer, bone cancer, et cetera. Does that help?

MS. DAY: The organically bound was confusing to me.

MR. FRANKE: May I add to that?

MS. DOUGHERTY: Sure.

MR. FRANKE: There are two types of organically bound tritium. We have to be aware of one, which is like the vegetation which we may eat, and also even if we drink water, a little bit of that tritium, tritiated water could end up in our tissues and become organically bound. That is what Owen was talking about, which stays in the body for a longer time period.

So extremely important to have adequate data on how long the various components stay in the body, and it all boils down to models. So that if we want to know what the dose is from a certain exposure to tritium in the environment, we definitely need to rely on models, all of the models, as some certainty associated with it.

So it's not really -- so that we can't say there's only one value, the value of the confidence in the model. I want to stress that if we talk about what dose you get from tritium, we need to address that we have only knowledge with certain confidence. So we can calculate the numbers, that confidence

interval.

MS. DOUGHERTY: Thank you, Bernd.

MR. HOFFMAN: Thank you, Bernd. I just came back just last night from reviewing EPA's risk assessment on the PCPB's at Upper Hudson River, and what Bernd just said, what is the theme of my critique is that any time dose and/or risk is calculated, scientific credibility demands that those numbers be accompanied with confidence interval.

MS. DOUGHERTY: Okay. So Sue's asked a really important question to help us add anything or make any comments to the sampling plan given the context.

MR. HOFFMAN: And on the top of my tongue it is too easy as a paid consultant to the Laboratory to sit at the table and keep your head low and be quiet, and so just wait until called upon. I'm one of those scientists, however, that has earned a reputation over time as being very proactive in terms of public involvement.

I cannot accept the job that I've been given if I knew that anything that was happening here was being massaged, was not being done in a forthright manner, and I knew that there was something going on up on the hill that was being covered up. I would not

accept this job, but it was mentioned earlier today that we all know that there's massive cover-ups going on.

For a year now, I've gotten to know the folks, gotten to know Ron Pauer, David McGraw, and met Sam Shank, and for about a year I've been allowed to go behind the kitchen up on the hill, and I'm seeing what goes on behind the scenes. I don't know what it's worth.

Sure, my salary now is partially paid by Lawrence Berkeley Lab, so any misstatements taken, but I have earned a reputation elsewhere of obstinately telling the truth. I won't compromise from that, and I can just testify from my point of view that there's nothing being covered up, and if there were, I wouldn't accept the position that I've taken on.

MS. DUFFY: Can you tell his mother is a kindergarten teacher?

MS. DOUGHERTY: Okay. So comments on the sampling plan basically where we are is we're still trying to see if any of you guys right now have comments for the sampling plan. You guys have three months of -- March 1 I believe is the date you guys got the sampling plan.

So three months to say look at it, read it,

digest it, ask questions about it, throw it next to your bed and never look at it again, wherever you are, what we're really looking to start doing is gathering any feedback you have about essentially what Sue's saying, given how we could take tritium into our bodies, how good a job have these guys done so far? Is there something they have missed? What should I be putting in the plan that is not there already? Do any of you have comments now as to how they can do a better job of this. Paul?

MR. LAVELY: I gave Dave a general comment a while ago, which is that one of the problems that I saw with the plan was that it doesn't provide someone who is reading it cold who is not an expert in planning for environmental sampling. The information that would be beneficial to know why are you taking this sample at this location, and what use is made of the information that you're going to gather?

So that there be a section that would -- say the rain water collection section, why is rain water collected? How does it fit into the overall analysis of risk? And what will we do with the data other than just look at it? And I think that if there -- that were there, it would make it not only easier for this group but for anyone else that is going to look at the

plan to -- maybe a citizen or someone who is concerned to be able to pick it up and without having the benefit of these presentations to look at it and get a more basic understanding of this.

If you want to call it an educational opportunity, fine, but to be able to, as I said, pick it up cold with just a little bit of an idea of what radioactive materials are and be able to look at it and know why are they sampling this? Why is it being sampled? And what are they going to do with the data once it's collected? What use is this? What -- how does it fit in to determining either what the releases were or are or what the dose impact is on people, but somehow to make that known.

That was really my only comment. Sure there are lots of specific things that could be another sample here or too many samples there or one, but overall I looked at the sampling, and it looks acceptable. Might want to change it once you see some results, but certainly I think the biggest thing, trying to make it where it's more understanding to the community, which should be the goal.

MS. DUFFY: Chris has something.

MR. WHIPPLE: Yeah. As I've read the plan and listened to the discussion last several meetings,

strikes me that I at least in sorting through this for myself I come up with three issues to be looked at in the sampling. The first is to characterize an ongoing release, exposures, contamination from the present activities, and that I think a lot of comments made about the level of activity at the tritium facility today versus in past years, and I think I had a concern that whatever they might measure now might not be representative of the past.

But taking one of the goals is to get a snapshot of the current situation, and I think that is certainly feasible to do, and I haven't seen anything in the plan that suggests it's not already being done reasonably well, although I'll go on the record I think for the third meeting in a row saying urinalysis is the one that you don't have to model. You can really measure what people are getting.

A second issue, though, given that there are some issues within the community anyway about past being larger than the current ones is whether there's residual contamination in the neighborhood of the Lab as a result of higher releases in the past, and I think those are harder to identify, and I do think that the discussion perhaps organically bound tritium could get at some of those.

But when you get the fact that much if not most of the tritium is in the form of tritiated water, water in the environment is pretty low, doesn't stick around, and, you know, the rainfall three or four years ago is not something you can measure in the soil today, and tritiated water runs through the soil as fast as regular water.

So I'm not -- I don't think it's likely that the contamination is going to stick around except for the organically bound portion. The third issue is one that's happened to have been an issue most of the Department of Energy sites, and that's dose reconstruction, and I don't see that's being identified as a central issue here. So far as I know, it's not one of the purposes of Superfund investigations; although, I could be wrong about that.

And I think if you had to pick a particular form of radioactivity ill-suited to dose reconstruction, you could find no finer example than tritium. The fact that it does not stick around means that it's very difficult to do anything other than to work off of the past measurements taken for purposes of historic dose reconstruction. I'm not optimistic that you can do field measurements that will tell you anything more than those records.

MR. WILLIAMS: The last speaker and some of the first speakers addressed some of the concerns that I had. I think that I would add on to in this way. Is there a possibility that there could be maybe a field exercise or something on a particular let's say vegetation sampling where the person responsible for that sampling would show, say, to assembled people just how those samples are being taken and why they are being taken and the processes they plan on using for analyzing them, particularly in terms of bottom screening and share of the tritium moving through the environment, and that brings up this issue of ground water again.

It -- you know, I would suggest that given the letter from the California Regional Water Quality Control Board, that that certainly would be one of the items that would be examined again.

MS. DOUGHERTY: So the ground water -- and, Carroll, did you -- you said specifically vegetation was your concern.

MR. WILLIAMS: I give that as an example. I would like to see the vegetation. I'm not as -- you know, I think I'm more familiar with that than I am tritium emissions into the area.

MS. DOUGHERTY: Okay. One second, Pamela.

Just before we go on. I want to just make sure that everybody -- has anybody any comments to Carroll before we go on to Pamela about the questions or comments? Nobody else? I thought I saw some hands. I'm sorry. Okay, Pamela.

MS. SIHVOLA: I would like to respond to both Chris and Carroll, and as far as tritium is concerned, it is very possible to do a dose reconstruction by using tree ring studies, tree ring analyses, and you can measure tritium in its organically bound form in the cellulose of each tree ring, and we have requested this already for several years.

In fact, the only sampling that the Committee To Minimize Toxic Waste would approve would be a tree ring analysis, which would be specific to looking at the tree rings, you know, for the past 20, 25 years.

MS. DOUGHERTY: So, Pamela, you're suggesting added to the sample plan comment that you guys are asking for tree ring study is in this response to David's comment that Akhilesh will be presenting on some of those

MS. SIHVOLA: It's separate. This is specific to dose reconstruction, and I said to Chris, and he knows that dose reconstruction can be done using tree ring analysis, looking for tritium in the

cellulose of each of the tree rings, and I also agree with Chris that the tritium, which in 1994, '95, was emitted from the stack is in the ground water. That's where we have to measure it.

And we believe in the data that we have requested has been provided to the community. We do not approve proceeding with any kind of sampling since we believe that it is not appropriate since the facility has not operated typically, and we believe until we get the specific data we have requested, we believe this -- the facility has not operated typically so we are only asking for tree ring analyses, and a couple of other things also regarding the meteorological station, and the two stations that have reason to be put into the grove, they should be moved further up the hill closer to Lawrence Hall of Science and not to be placed at the base of the stack. They are not measuring appropriate meteorologic conditions, nor are they picking up the few we know from the stacks since they are so close to the base of the stack.

So at some point, community input has to be included for the proper location to have two new air monitors and meteorological station, and going back to the very first point that we started with, I have made

copies of the community's specific requests for information for data, and this is from the Panoramic Hill Association, from the campus Parnassus Neighborhood Association, Citizens Opposed to a Polluted Environment, and the Committee to Minimize Toxic Waste, and we are asking that that sampling that not -- nothing will happen until this data have been provided to community members, to task force members.

MS. DOUGHERTY: Let me know just -- Pamela just described a very large discrepancy in belief systems.

MS. DAY: One question I do have on that is I don't see much purpose in doing sampling unless there's a standardized sampling protocol approved by EPA or other appropriate agencies. Doesn't do you much good to run a test one way and not be able to compare it elsewhere. So if there's any kind of data that's being requested, I certainly would like to put my two cents' worth in that it's done by standardized protocols recognized by regulatory agencies.

MS. DOUGHERTY: Thank you, Sue, and I do want to note Chris and Pamela seem to be in some disagreement about the last comment about tree ring. No? Yes?

MR. WHIPPLE: Not having a sense of at all of

the capability of the tree ring studies and tritium, and I'd like to hear about it, but I couldn't tell you how well they can do it.

MS. DOUGHERTY: And we have a plan to hear about that soon.

MR. WHIPPLE: I do think that the variability of the measurements of organically bound tritium in vegetation in studies that are done various places is so high that trying to establish a baseline that relates tritium emissions to tritium in plant cellulose by itself is problematic, and then when you try to go back in history and reconstruct things, it gets harder.

MR. LAVELY: I know I'd be asking you to respond for the Superfund folks, but how would that be used in a Superfund process, tree ring study?

MR. BANDROWSKI: Yeah, as far as the tree ring study, it falls into the category of we would like the community and the work group to review the sampling plan and provide their thoughts on ways that it can be improved, but that's not something that would be used within the Superfund HRS scoring system.

There's no mechanism for Superfund to include that kind of information and at least for Superfund's purposes they would not be able to use that data.

But, you know, we would provide added assurance to community members that they're getting a better sense of what's going on in the Lab.

Where EPA is supportive of the community providing on anybody, but for the purpose of Superfund, it's not needed, and I don't think there's any way to add it in if we did have that data. The HRS scoring system doesn't have a mechanism to allow that.

MS. DOUGHERTY: Do you have comments here?

MR. HOFFMAN: I wanted to repeat what Chris Whipple said about tree rings. First off, Chris, you may not know this very recent or the past issue of Health Physics had an article on the sampling of organically bound tritium tree rings, and it's successfully tracked local emissions from Chalk River whereby tritium was a reasonable tracer of past conditions, and carbon 14 was not.

But the base reconstruction on tree ring analysis, that's a very difficult task. The tree ring analysis can tell you something about the fact that nothing's being covered up, the fact that you have some environmental record of historic operations, but you can't match up a tree ring and say that if a tree ring has some pico curies per gram of tritium, that

that equals so many curies released in the environment, and therefore, that equals so much offset exposure. It's more of a relative indication of the impact of historic operations at that location as opposed to an indicator of what this means in terms of offset exposures to humans.

MR. WILLIAMS: Well, tree ring analysis is something that I'm fairly interested in. I've been involved in some of that work in regards to tracing rainfall over a period of time or tracing or looking at frequencies or even insect rates, but I'm curious in terms of how it would work with tritium.

It would seem to me -- I mean, I have no idea how, you know, how tritium is organically bound to the tracheas or whatever over a period of time. And I would be interested in seeing how that works.

MS. DOUGHERTY: So that's another thing we have to add. I want to comment on the time. We have 10 minutes, and Fran, I see you.

MS. PACKARD: I -- just one of my questions, and maybe it's to Pamela; maybe it's to somebody else. But I don't understand why if we generally agree that this is a good sampling plan, why it can't go forward while this other historical information is being provided or looked up or verified or discounted or

whatever the appropriate thing to do with it. So, like, why can't sampling go forward with the agreed-on plan? It's a good plan.

MS. DOUGHERTY: Fran has a point. Have you guys look up here for a second. This is kind of where we were in the last meeting.

MS. DUFFY: Let her make her point.

MS. DOUGHERTY: At the end of the last meeting, you guys, some of you suggested some various and sundry options for what next steps might be as far as the sampling plan goes, and one of those was to start sampling with a plan as-is. These were culled directly from the transcripts. So if you remember something differently, please look and remind me.

Another was to start sampling and still have the experts comment on that things could change or be added, and the last one was -- the third one was start sampling after presentation of comments by both experts. Some of you have said last time you thought it was important to experts to make their comments and to be experts.

MS. DUFFY: Experts meaning Bernd and --

MS. DOUGHERTY: Bernd and Owen, and I don't know what that means.

MS. DUFFY: That is to have time to discuss

-- gather more information, to have one more meeting where information is disseminated, for instance, to answer Sue's questions or Carroll's questions.

MS. DOUGHERTY: And another option that's been raised tonight by Pamela, a representative for the Committee To Minimize Toxic Waste, has been to not proceed. That's another option.

MS. SIHVOLA: Not to proceed until all the data has been provided, and also task force members have been able to read the comments from the consultants. Also, I just wanted to add that this is environmental sampling at LBNL. LBNL is a nuclear facility. There are hundreds of other radionuclides that have been released into the environment, into the soil, in the soil, water, and ground, and I think it would be very inappropriate to include -- this is a Superfund CERCLA driven evaluation, and for this reason, I think all of the radionuclides that have been used or manufactured at the facility during the past decades should be included in the sampling plan, and the site should be evaluated as a whole, especially in light of the fact that we believe that tritium emissions have been artificially curtailed in the last few years.

I think it is more appropriate to go and look

for those radionuclides that have longer half lives. We know of uranium spills. We know of curium, and we understand that under the program that Iraj manages, there is no sampling for radionuclides at LBNL at this time. The Department of Toxic Substances Control asked tritium to be removed from the process. We have nobody officially looking at radionuclide contamination of the soil and ground water at the site under any kind of regulatory program, and that has been one of the reasons why the CERCLA driven program under USEPA would be the most appropriate to be utilized at this time. So we are asking for all radionuclides to be included in a site-wide sampling plan. So this current plan is completely aside from that perspective.

MS. DOUGHERTY: So that's that perspective. Is there another perspective want to put on the table in terms of your options to proceed? Okay. Let's talk for just a second about how the rest of the group feels. Pamela has just represented her position very clearly.

Do any of the rest of you have feelings? I heard you say, Fran, that you were considering the idea that we maybe should just start sampling and add to that, right?

MS. PACKARD: Well, I just wanted to know why not. That's one reason why not.

MS. DOUGHERTY: What about other people; does anybody have a feeling about anything? Some of you guys last time --

MR. BANDROWSKI: From EPA's perspective, we have provided some comments to the Lab that we need response on, but we would like to see the review done by Bernd and by Owen, but I'm of the opinion that once we've incorporated, you know, the major comments at that point, that we can go into an iterative process where we can start sampling and address the main issues that the community has raised in their original request. At the same time, we can start to address any additional concerns that are raised by work group members or community members, so we at least start the process and start getting data taken.

Somebody made the comment earlier -- I forget who it was -- that oftentimes when you start sampling, other questions come up based on the results. So it's going to be an iterative process. We're not going to have one set of samples collected in the end. So I think the sooner we get started, sooner we can start seeing what's out there and figuring out where to go next. That's our opinion.

MS. SIHVOLA: I feel there has to be full agreement regarding all the issues related to the geography, related to radionuclides, regarding the sampling. I think it has to be done absolutely thoroughly to the satisfaction of all of the community members, and I don't think that it is appropriate to get started until all of the comments have been incorporated, reviewed and incorporated in full.

MS. DOUGHERTY: It's important that you --

MR. WILLIAMS: Well, I feel there is a thing called preliminary sampling, and it would seem to me that that process will give direction that in terms of as you look at the data, and so it would seem to me I don't see how we can ever wait until we get all the comments and everything down before we begin anything. We almost start nothing then. I think we have to do preliminary work and then see where it leads us.

MS. DOUGHERTY: Let's go around the room.

MR. HOFFMAN: Basically today when we were discussing this at the Lab, I basically repeated your exact same comment. There are some things that can be done early, and the information from them that would be very valuable and in refining the rest of the plan.

MS. DOUGHERTY: Keith, did you have an opinion about that?

MR. MATTHEWS: Let's start sampling, and as reasons to make further investigations and inquiries come up, let's make those, too. Let's get on the road.

MR. McGRAW: I'm encouraged by Mike Bandrowski's willingness to going forward. I'm for -- the Lab's more than happy and indeed anxious to start some preliminary sampling under these guidelines. As I said earlier, we're already sampling and publish the environmental report every year, but if Mike is willing to have us go forward, he's satisfied that we're addressing his comments, let's go forward.

MS. DOUGHERTY: Carl is standing in for Dick.

MR. SCHWAB: I, too, would be ready to start sampling if people feel there is some value to some of the sampling plan that's been proposed and occur doing additional sampling as it progresses.

MR. WHIPPLE: Well, I go with the same sentiment, the process that you get to go back and look at the curies harder and have typically a better process than trying to anticipate in advance everything I want to know and going out in the field and gathering everything all at once.

The other point is here is -- we're not talking about starting from scratch. The Lab does a

lot of sampling, has done a lot of stamping, and what we're talking about is filling in around what's already being done. So I think there's no particular reason to wait. The only risk from going ahead is to DOE and the Lab's budget that, you know, they're going to have to go back in the field later perhaps, but they seem to be happy to take that risk.

MS. EVANS: Well, I would like us to take a look at what Bernd Franke and what Owen Hoffman have to say, which I think we can do in the near future.

MS. DOUGHERTY: Bernd, you're due on 30 June; is that correct?

MR. FRANKE: That's right, and I would like to have met -- when I came to realize that those members that met me that I'm looking at various issues, not just the sampling plan and the conflict. I'm -- contract I'm carrying out for the City of Berkeley, I'm looking at past releases and exposures. I'm looking at the compliance issue of current issues exposures, and I'm looking at the sampling plan.

So it's only one piece of my work, and I will present my preliminary report by the end of June, and I'm in the process also in itself where I will be happy to review the comments. I am there to address community concerns, and if there are questions to my

preliminary report, there will be a final one by the end of the year. So that is not a definite report in itself.

I will address certain issues, which may go beyond what was talked about today, the issue of the type of releases at the facility. Some of them are quite short term. So that raises the question as to how you adequately monitor for release of tritium short burst, and I will reflect on that and make a recommendation. So as to how the recommendations will be factored into the decision. It's up to the community.

I'm only there to advise the City in this regard, so by the end of June, you should have my preliminary report. I will be happy to receive any comments after that and to address questions as to what my recommendations are.

MS. DOUGHERTY: Bernd, I have a question for you on your schedule. Are you going to be here in person to present your report?

MR. FRANKE: I have currently no plan to do so, but I would like to hear when the next meeting will take place, and I'm scheduled to travel to the states sometime later this summer, so I may be able to.

MS. DOUGHERTY: Just one -- just to do a segue here for all of you in terms of calendaring since you have asked for both Owen and Bernd's comments, I think it would be nice, Bernd, if we could arrange to have you and Owen here in person to speak to all of us and to speak to your comments on -- since this task force has a sampling plan, if you can speak to us on that piece of your contract with the City. Do you have dates, times when you think you're going to be here?

MR. FRANKE: No, no, I cannot really commit to that because I have a contract with the City, and it's up to the City to decide whether the money will be spent on travel, and travel for task force meeting. I would be happy to do it maybe if I can do it long distance through a telephone hook-up.

MS. DOUGHERTY: So you can do that.

MR. FRANKE: Once the preliminary report is out, I'd be happy to, of course, answer questions which may be raised in connection to that.

MS. DOUGHERTY: Thank you, Bernd. Okay.

MS. EVANS: So just to finish up my response, I'm concerned that if DOE doesn't do any sampling until all agree that we might never do any sampling, and I'm concerned about that, and then the other issue

is got to do the ground water. And I would really like to know a bit more from the Regional Water Board, what moved them to write this letter, and what, you know, what concerns they may have ultimately about the sampling plan.

MS. DOUGHERTY: You're asking for just a feedback letter?

MS. EVANS: I think a letter would be okay. I do have a call in, and I've been exchanging voice mail with Mike Rochette and just trying to get more information. I don't know. Maybe the rest of the group might not find it interesting. Maybe they wouldn't, but I personally would.

MS. DOUGHERTY: Thanks.

MR. LAVELY: Thank you. Yes, I agree. I think that we should, just as Carroll mentioned, that we should proceed with at least preliminary sampling so that we can look at what the results are and make any adjustments to the plan as we see what they are.

MS. DOUGHERTY: Mike, you've already spoken

MR. BANDROWSKI: (Nods head.)

MS. DOUGHERTY: Ed?

MR. BAILEY: Probably will not come any surprise to anyone here that I'm very much in favor of beginning to take samples. We have put off expanding

the sampling program for roughly three years now. The regulator -- I believe a lot more measurements I take that in records, somebody finds them, and I think it's crucial that we start taking samples in the environment because that's really what we're trying to measure, what has been the impact of that operation. What is the impact of that operation. So I would be very much in favor of beginning.

I'm not familiar with very many sampling plans that haven't been changed after the perfect plan is implemented. There's always changes that occur, and hopefully we will be able to make those changes as the plan is implemented.

MS. SIHVOLA: The Superfund driven sampling is very simple. You have screening levels. You have screening levels for air emissions, 50 pico curies per cubic meter, and for water, surface water as well as ground water, 600 pico curies per liter.

I think we all know that LBNL meets both of those criteria, and as was presented last time, LBNL is eligible for Superfund NPL listing. The other sampling I think is inadequate and inappropriate under the current circumstances.

I can't imagine anyone here, professional individual, I can't imagine Owen Hoffman really even

thinking that the community would be satisfied with the sampling plan without the data that we have asked to be provided us in the specific form that we have requested it so that we can make our own independent assessment on the appropriateness of the sampling plan.

I believe that there is -- if you want this to be on the level, if you want this process to be transparent, I think we need to receive all these data as well as have all the existing data, including all the sampling that the NESHAP and Susan Monheit collected in 1994, '95, '96, to be completely and fully included in the evaluation.

And then we also know from Iraj Javandel's recent site restoration program monitoring data, we know that tritium levels have gone down in the ground water and in soil water, and we believe the reason is because the emissions have been curtailed by curtailing of operations.

I think if this is to be an honest, transparent, truthful process, you cannot cut corners. You cannot, although you would like, you cannot do that. This is the reason why community has invested so much time looking at so many documents spending now, you know, our fourth year looking into this

problem, and I don't think that we have invested that time to basically proceed without a thorough acceptance of a plan.

MS. DOUGHERTY: Thank you, Pamela. Jeff?

MR. FIELDER: I would largely probably defer to Bernd's determinations as to the appropriateness of the various elements of the plan. I think I'm in favor of getting some data on the table, and maybe we could find some commonalty amongst us as to what courses may or may not be appropriate in the context of having this data that Pamela's requesting or not. I'm involved in ground water/surface water quality every day, and so I have a fairly strong interest in, you know, having full and thorough investigation of ground water quality for any appropriate parameters.

So I would like to see, you know, I think the Regional Board's comments here are simply comments. I read them as comments. I read their corrective action letters all the time. There's no deadlines requirements. They're simply focused comments, and I think reasonable comments. So I'd like, you know, that followed up in some manner.

MS. DOUGHERTY: So, Jeff, in terms of sampling, do you have a sense like you would like to go ahead and do the preliminary sampling idea that

Carroll came up with?

MR. FIELDING: I think so. I don't see how having so many so tritiation quantity data in the past is really significant to the health effect or environmental effect that we're experiencing today. I think that the issues of reconstruction of past releases and stuff is going to be difficult and very complicated to interpret.

I'm not confident that that reconstruction is going to be very successful, but I think it's an important exercise, probably, but I'm interested in thoroughly characterizing what those effects are in Berkeley ground water.

MS. DOUGHERTY: Great.

MS. DUFFY: Let me clarify. Are you suggesting that we wait until we hear Bernd's comments, though?

MR. FIELDING: Well, no. What I'm saying is that, you know, Bernd is our expert, and he is as a portion of his task reviewing the plan and comment, so I have not seen any comments from him, so I would like to review those and see, you know.

MS. DOUGHERTY: Since Jeff just spoke, can I clear up just one -- and Bernd, since he's in the air waves here, and he's the City's representative, Bernd,

do you have feedback for us as to whether or not we should begin with a preliminary sampling program?

MR. FRANKE: Well, it's a tough question because I'm not making the decision as to whether you have all the information in front of you and whether there's a decision to make. I have certain specific recommendations, which I will lay out, and I hope that you have some patience here.

I'm working under deadline with the City, which will address specifically the monitoring of concentration of tritium in the air, and also -- and also I'm looking at the other pathways as well. So I do not want to jump to conclusions right now since I'm still in the review process also, as is my colleague. So please be patient, the end of June.

MS. DOUGHERTY: Thank you, Bernd. Eric?

MR. ARENS: I don't have much of a comment, pretty new to this whole business, but if Bernd is going to have some something in a month, and we have a meeting once a month, then it might make sense to hang on until Bernd gets his paper in.

MS. DOUGHERTY: Okay. Great.

MS. DAY: Well, I don't have a very specific recommendation on this. Candidly, I know Superfund is quite picky on what kind of samples they get and what

they use, and if you're aiming at trying to answer Superfund questions, then one has to be very exact in what sampling, what methods and that sort of thing to meet the Superfund.

If we're looking at some of the other agenda items that seem to be around the table, such as knowing whether we're still being exposed to things, tritium, if we ever were, it's -- if it's a continuing thing, that's something.

If people are concerned about the health and should ask now and not fool around for several more years. So I'm pretty torn on which way it goes. I do have some interest in the uniqueness of most of the plant life that's around, at least the neighbors around there, and that is that we all grow things that are very water/drought powered, and so these plants may uniquely concentrate water and hold on to it more than plants in some other part of the city, so there may be some reasons to look at that and perhaps do that with our speakers when they do this.

MS. DOUGHERTY: Thank you, Sue, and Fran.

MS. PACKARD: I tend to concur that we should hear from Bernd and Owen, and assuming that that is okay, and we're fine to go.

MS. DOUGHERTY: Okay. Carroll, we know what

you said. David?

MR. MILLER: Well, I've said before I would like, of course, to see us get started and get some data, but I think the City of Berkeley has retained somebody specifically to work together with the Lawrence Lab to arrive at a program for looking into this whole issue of what is the risk that they're facing. What are the hazards in the environment, and I think we should go ahead and honor that stipulation by waiting for Bernd and the representatives of the laboratory to go ahead and agree on a program for starting to do sampling.

MS. DOUGHERTY: We included Bernd, so I'm going to include Owen.

MR. McGRAW: I think you started with Owen.

MR. HOFFMAN: I think he did start with me, and I just reiterate that I think it's imperative, Pamela, that this process take seriously citizens' requests, comments, and criticisms and at the same time, I don't think that we need to resist the opportunity to proceed with preliminary sampling and get something under way so that you're getting some initial information that does not have to be the final information, but some information so that one can see what kind of results are produced with the few samples

that are coming in, and I think simultaneously you can challenge the question are these samples somehow artificially showing results of a purposefully downsized operation at LBNL, or is there evidence to show that LBNL is operating at normal capacity? So these results are indicative.

MS. DOUGHERTY: Okay. We need to make some decisions about what we're going to do next in terms of meeting. There's a majority around the table of folks who would like to get started with preliminary sampling, as we just heard, and we've been told in our last meeting I believe by Ron and others that immediately we're getting started there's some lead time involved in that. So I want to note that immediately, given sometimes the restrictions getting -- Mike, I think you guys said you would be able to, you know, go along with getting started a soon as possible, so that should make the process a little easier.

MS. DUFFY: What does that mean, "as soon as possible"?

MR. BANDROWSKI: I need to clarify. I think I said that we would like to see the comments from Owen and --

MS. DOUGHERTY: Right.

MR. BANDROWSKI: -- and Bernd as well as we have officially provided some additional information that we want the sampling plan to respond to, so it's at least that part is in sort of DOE's court. They need to respond to our comments, and I don't know how long that will take, and once Bernd and Owen provide their comments, I mean, depending on what their comments are, we have to see how to address those, so it's -- I wouldn't be able to give a time of when is immediate or when is appropriate until, you know, we move forward.

MS. DUFFY: There's a qualifier, and Sue's point about gathering data.

MS. DOUGHERTY: We have opposing view points represented by Pamela, Committee to Minimize Toxic Waste, that they would prefer to wait until a little more complete plan was established form before the sampling has begun. We note it is an opposing -- we can't take any comment right now.

We have a couple of options. Do you guys want to meet again in a period of time to hear Owen and Bernd's comments? That seems to be the -- generally the consensus that's here on the table, which means, Bernd, your responses are coming on 30 June. We're talking maybe an August date or September

date because August is very hard for people with holiday. We could do an early July date, but doesn't give you much time to comment.

MR. BANDROWSKI: Can't he give a presentation?

MS. DOUGHERTY: Bernd?

MR. FRANKE: Yes.

MR. BANDROWSKI: I was just wondering if Bernd's comments were completed on the 30th, and sometime after the 30th he might address, you know, we could get a copy a few days or so before to look at it, and Bernd could --

MR. FRANKE: I can be hooked in, and then I think that's my job, yeah.

MS. DOUGHERTY: Only time we have available in July, just so we know, I have a couple of date schedules here. We have the first week in July. We know, of course, the fourth is a holiday, so Sue's not available. Okay. That's the only week in July that that we have available as an option. We also have dates starting with August 2nd and 3rd. These are the Wednesday's and Thursdays you've all requested on the 2nd, 3rd, 9th and 10th, 16th, 17th, 23, 24

MS. DAY: I would like to put in the first week of every month, I can't do it, totally saturated.

MS. DOUGHERTY: So that's a request, period, from you, Sue. Thank you.

MS. PACKARD: Yeah.

MS. DOUGHERTY: Let's take the August 2nd and 3rd date, then. Does anybody else have anything they absolutely know solidified in their calendar every month they can never do it that we could be informed --

MR. BANDROWSKI: What was the reason we couldn't do it the rest of July?

MS. DOUGHERTY: We're not available at all for -- past the first week.

MR. BANDROWSKI: Can we have a work group meeting and have Bernd present his data to the work group without the facilitators?

MR. McGRAW: Form the Lab's point of view, I would not like do that. I would like the facilitators present.

MS. DOUGHERTY: Okay. The second date I believe is 9 and 10, 9 or 10, I should say, August.

MS. PACKARD: 9 is out.

MS. DOUGHERTY: So 9 is out for Fran. Can everybody come 10 August? Bernd can you commit to 10 August by telephone?

MR. FRANKE: Yes, I believe I could.

MS. DOUGHERTY: Okay. Owen, how about you for 10 August?

MR. HOFFMAN: I need to check my calendar.

MS. DOUGHERTY: Owen is going to check. No, you cannot check it right now? Try to make Owen tell us. He won't tell us. Does anybody else know of a conflict already? Can we schedule? We have 10 August right now. That gives us five weeks from the time that Bernd presents his report in writing. So that's our date of right now preliminarily. We will confirm that. You guys will get your stuff in the mail. Pam, any final comments? I'd like to hear Pam's comment. We need to allow public 10 minutes of public comment.

MS. EVANS: Is there a date by which we might expect to see Bernd's comments?

MS. DOUGHERTY: Great question. The City, I guess --

MR. FRANKE: Yeah, I square that with Nabil, and he isn't here tonight, I guess.

MS. DUFFY: Not here.

MS. DOUGHERTY: Jeff Fielder is here, just would you like to speak to Bernd about that?

MR. FIELDING: Hi, Bernd. Nabil couldn't be here tonight. I guess just probably send it electronically to us.

MR. FRANKE: Sure, okay.

MS. DOUGHERTY: So then it's available to the whole group on the 30th, is that correct? The whole task force can have it the 30th, Jeff?

MR. McGRAW: I doubt the City can commit to letting us see the report electronically on the same time Bernd sends it to the City. I believe they need a few days to digest the report themselves. Bernd is working for the City. I think we need to respect that.

MR. FIELDING: It's a Friday. I would imagine be available first thing beginning of the next week.

MR. McGRAW: So I think the task force could expect it within the next week.

MS. DOUGHERTY: Does that answer your question?

MS. EVANS: Yes, thank you.

MS. DAY: Mid-July.

MS. DOUGHERTY: By mid July, that's good. Sue's giving us a margin of error, then. Mid-july you can send that. All right. Now, we need to allow for public comment, and it's been a long evening. I thank you so much for your time and attention, task force members. I think you guys did a lot tonight.

Appreciate that, and we need to allow 10 minutes for public comment. Is Molly Field here? Molly, I don't see you. Oh, Molly, there you are.

MS. FIELD: I'm sorry.

MS. DOUGHERTY: We have 10 minutes of public comments.

MS. FIELD: Yes, we do.

MS. DOUGHERTY: And so Molly will be reading the names of persons she has pulled. Again, task force members, we thank you.

MS. FIELD: Barbara George.

MS. GEORGE: You still don't address one issue that I'm really concerned about. I understand that the way the monitoring is currently done in the ground water at LBNL, there's one person who is in charge of it, and that there are -- basically that the figures on what's found in the wells are very tightly held, and I think that there's some question of whether there would be sufficient examination of all the data that exists, and so that there could be no possibility that the tightly held information would make it possible for the Lab to determine where the contamination is, and so, therefore, not test in those particular areas.

And I think that's one of the questions that

really needs to be addressed if you're concerned about credibility, and I would say that there's a need to have the person who is in charge of the ground water wells step aside for the time of the monitoring of these for this particular study because I think there's considerable question about how that's being done currently, and what has been done in the past and what the figures are that are there.

So I would really like to make sure that that's a totally independent person that is -- that has complete access to all the data there, and I would just also like to say as far as tonight is concerned, I cannot believe that you can't come up with a figure on the tritiations. It just seems like we're, you know, you're willing to show us everything except the one thing that is at issue here, and I think that's completely ruining your credibility. So I just don't understand why you want to do it that way, because if your figures are going to show us what you claim they're going to show us, why don't you show us the figures? I just don't get it.

MS. DUFFY: Thank you.

MS. FIELD: Elliott.

MR. ELLIOTT: Thank you. It's with amusement and interest that I watched these proceedings, because

I know a little bit of the history of how this group came into being, and I'm not sure how familiar all the members -- I know some members are familiar with how it came into being, but originally we had the Tritium Issues Work Group set up, which the City of Berkeley participated in, and Committee to Minimize Toxic Wastes participated. LBNL was not even allowed to be a member of it because they were there to provide information.

Well, after a couple of years, the City of Berkeley and the Committee to Minimize Toxic Wastes pulled out of this group, but LBNL was not providing the information. LBNL created this group so that they could have more control over it, and they are providing the information basically that they want to.

Now, the reason I'm giving to you this background is because monitoring and sampling plan, key to this whole process, the sampling is as far as LBNL is concerned was let's do air sampling, and when we show we are doing okay with air sampling, we're not going to go into anything else. Okay.

The sampling that was originally being asked for, one thing is like tree ring, ground studies, ground water soil contamination, and the reason for that is because it would give an idea of when the

amounts of radionuclides in the environment went up drastically.

They might have been seven years when they went up drastically, and if the years when they went up drastically, you could show correlation with certain health problems, then you've got something there, and the purpose of the original group was to do a report for the purpose of doing a risk -- a health assessment. Okay.

Now that is being undercut, and this whole talk about well, we'll start doing our sampling now and see what happens, the reason there is so much resistance to it, and I can't speak for the committee because I'm not on the committee, but the reason there's so much resistance to it within the community is very simple. We don't believe the Lab will ever do the other sampling we want. They're going to produce the result they want. They are going to broadcast that in all newspapers, and then they're going to drop it.

Everybody knows what's going on back here. Well, maybe not. I think enough people know what's going on here. It's a public relation show by the Lab to win over public opinion so they can do what they want to do. So we already said we won't close the

thing.

MS. FIELD: L.A. Wood.

MR. LAVELY: I have a question. I'd like to make a response to that. There's several of us here who belonged to the Tritium Work Issues Group, and first issue is that the city of Berkeley never withdrew.

MR. WOOD: I thought that you take community comment.

MS. DUFFY: He's not taking away --

MR. WOOD: They said they did. It's a fact.

MR. LAVELY: City of Berkeley did not. Nabil did not --

MR. WOOD: -- step on comments of the public. It's inappropriate. You violate the ground act. You violate the rules. It's -- public to come up here and have someone sensor their comments.

MR. LAVELY: We're --

MR. WOOD: It's not appropriate. I have a lot of respect for him. It's not appropriate for them at this time to make comments.

MS. DOUGHERTY: You're right.

MR. WOOD: He might write the -- website --

MS. DOUGHERTY: Let --

MR. WOOD: This is the --

MS. DOUGHERTY: You're right.

MR. WOOD: -- please, and you had a real hard time with that tonight, as I said, same voice as Elliott. I do not belong to the committee. I'm part of the community out here, and I am extremely dismayed at this group. I sat in the Tritium Issues Work Group for over three years.

Mr. Hoffman, you know, you're an employee of the Lab. I have no respect for you. Mr. McGraw, you work for the Lab. Mr. Schwab, you work for the Lab. Chris you work for the Lab.

MR. WHIPPLE: No, I don't.

MR. WOOD: Bandrowski, I'm ashamed. I'm almost ashamed to see the EPA sheepishly say, well, geez, you know, if everyone else wants to do it, I guess we can go along when over three years' worth of resistance, you refused to answer the question. You refused to put up the data. So what do you do now?

Bandrowski, you've got a sampling plan out there. What are you going to do? Are you going to, you know, go measure Kensington, go waste your money, turn around and waste your money again? Bernd, you out there? I hope you are. Every time I turn around, someone else is trying to take your money and spend it some other way. Let's bring him back to Berkeley to

give a presentation. How many other things can we think of to do with him?

I'm a little bit dismayed. I hope with the City of Berkeley that this -- at least its contractors should be, you know, staff should be saying listen, we paid good money for this guy. We deserve his answer before we go ahead, but this cart is way ahead of the horse. You think we just want to change the lead even without the City's contractor.

You're dis'ing Bernd Franke, and you're putting a lot of pressure on him to produce long before he has to. He hears see us. Give me a tougher question. You put me on the spot. I think that's highly inappropriate. It makes the contractor in this process tainted, and I worry about Mr. Bernd Franke and his relationship to you because of it, if you don't give him fair, equal, level ground to operate on.

FROM THE FLOOR: That's the whole point of this group.

FROM THE FLOOR: Absolutely.

MS. DOUGHERTY: Can I have the mike, please, for a second? Thank you. Is that my -- it's really important for me to comment just briefly not on the comments, but the ad hominem is not acceptable,

whether it comes from the community or whether it comes from a task force member, and I would recall to all of you the rules for your interaction we have on the wall, and I appreciate that people have strong feelings, and I hear that, and it's not okay to repute someone's integrity in this group, period.

MS. FIELD: Robert Fox.

MR. FOX: I'm Robert Fox. I spoke to you last week about the question of what would happen to a pregnant woman if she visited the Lawrence Hall of Science, and I relayed to you that there had been over seven children that had been born by parents that were either in the same building or in the building next to the National Tritium Labeling Facility. I do not work for the facility. I was not paid to be here. It came to my mind this evening that what would happen to a pregnant woman that was taking samples for tritium? How would her baby turn out? Well, Susan Monheit had a very lovely baby.

FROM THE FLOOR: That's real scientific.

MR. FOX: I would also like to comment, well, you're saying no safe dose. So if you flip a coin 70 times, all comes up heads, what does that tell you? Please do not interrupt me. I did not interrupt you when you spoke.

Also, there seems to be a question on whether the facility is conducting operations as normal. The overhead that was presented, it states at the bottom NIH reporting or National Institute of Health. It comes to mind that this facility is funded by the National Institute of Health.

Friend of mine owns a vineyard, and I asked him how do you -- you don't speak any Spanish. How do you relay your instructions to your workers? And he goes, I only know two words. "No trabajo; no dinero." Translation is: No work; no money.

So my question is if Phil Williams is not doing the work at the facility, how is NIH going to remain funding him? I think that's a very good and valid question. The Lawrence Berkeley Laboratory oversees the environmental management of his operations, doesn't give him funding. So if he doesn't produce work, how is he going to stay in business? Thank you.

MS. DUFFY: Thank you very much. Meeting's over. Thank you very much.

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CERTIFICATE

I, the undersigned, a Certified Shorthand Reporter for the State of California, hereby certify that the foregoing proceedings were reported by me, a disinterested person, and were thereafter transcribed into typewriting, under my direction, to the best of my ability to hear and understand speakers; that the foregoing is a record of said proceedings.

Executed this 13th day of June, 2000.

LAURA AXELSEN, CSR NO. 6173